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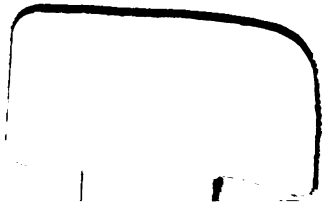
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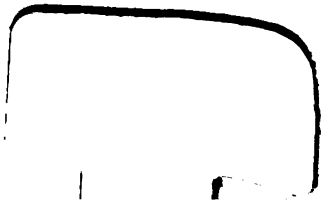


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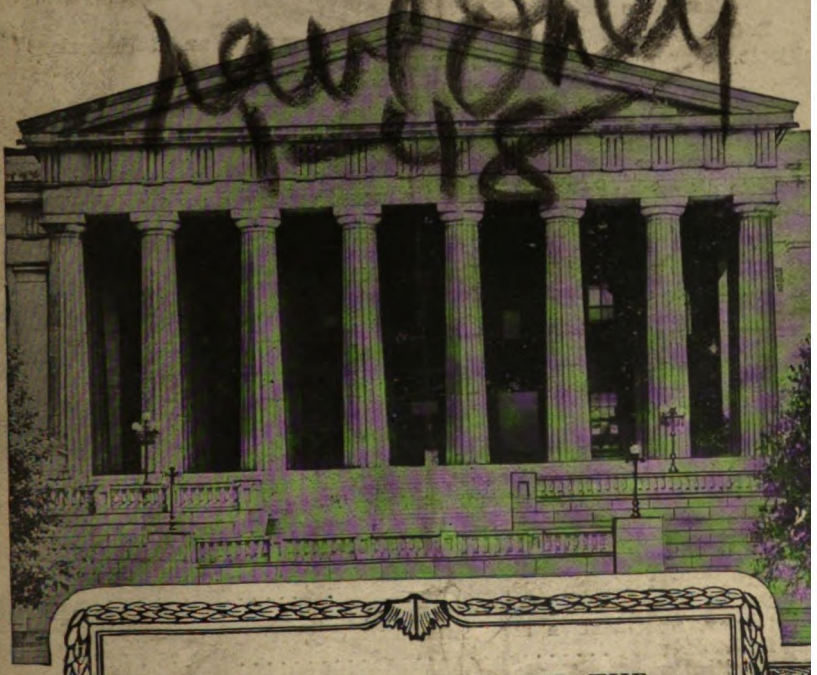
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JOURNAL
Of The
PATENT OFFICE
SOCIETY



THOMAS JEFFERSON AND THE PATENT SYSTEM

RELATION OF THE EXAMINER TO THE INVENTOR AND HIS ATTORNEY

RULES 1 TO 16 INCLUSIVE

RULES 17 TO 23 INCLUSIVE

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THE RICHMOND CAPITOL JEFFERSON

One of Six Celebrated Virginians Surrounding the Equestrian Statue of Washington in the Capitol Square, Richmond.

Thomas Crawford and Randolph Rogers, Sculptors.

See page 5.

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Journal
OF THE
Patent Office Society

Published monthly by the Patent Office Society

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Publication of signed articles in this journal is not to be understood as an adoption by the Patent Office Society of the views expressed therein. The editors are glad to have pertinent articles submitted.

VOL. I. SEPTEMBER, 1918. No. 1

EDITORIAL.

On another page will be found an article on the Patent Office Society. It seems proper here to set forth the *raison d'etre* and the purposes of this publication, the journal of the society.

Of necessity some medium must be provided for the publication of the lectures given for the benefit of the assistant examiners, for, obviously, only a modicum of their value may be availed of by a mere attendance thereupon.

It will be desirable to publish from time to time certain proceedings and actions of the society to record progress in the attainment of its objects and results accomplished by affiliated societies affecting the patent system: also

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advance programs of meetings, lectures, etc., given under the auspices of the society.

And, speaking generally, the need has been recognized for some agency of the society in which all the membership could take an interest and part to further the objects to be attained. With an associate membership, which, it is hoped, will be large and will, of course, be widely scattered, a publication of some sort is the most natural means through which this membership may keep in touch and work with the active membership in Washington.

Consequently, under the jurisdiction of the Publicity Committee of the society, and Editorial Board has been chosen to conduct and publish this journal.

It is planned to publish technical articles from examiners within and technical men outside the office but it is not planned to invade generally fields covered by existing scientific publications.

Contributions are already promised from leading members of patent bar association and this evidence of interest is deeply appreciated and very gratifying.

It is hoped to make the journal a forum for the presentation and discussion of legal and technical subjects relating to the useful arts: and further, a medium through which a wider knowledge of the workings and advantages of the patent system may be gained by inventors and manufacturers, and through which all interested in the improvement of the patent system may work to the common end. The Editorial Board invites coöperation of all the membership to make the journal a success.

OUR COVER DESIGN.

The structure pictured on the cover is the portico of the Patent Office at the center of its south front and forms its main entrance. As shown in the illustration, it represents the view of it as seen from Eighth Street, the building on either side of that street providing a sort of frame work to limit the view to the portico. The portico, from this point of vantage, thus segregated from the rest of the building, has the appearance of a separate structure. It is a copy of the famous Parthenon, and its massive Doric columns rest upon a base, two stories in

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height, comprising a staircase coextensive with the entire width of its front, making a pedestal of grand proportions, and giving the whole structure a decidedly monumental aspect. This portico is the most individual feature of the Patent Office building and is one of the most dignified and impressive architectural achievements in a city of splendid and monumental public structures.

THE PATENT OFFICE SOCIETY.

The object of the Patent Office Society, as set forth in its constitution, is "to further the industrial development of the United States in so far as the patent system is a factor thereof, to promote and foster a true appreciation of the American patent system, to cultivate a high standard of professional ethics among patent practitioners and examiners, and to promote the professional, intellectual and social welfare of the members of the society."

The need for a society of this character arose from an appreciation of the fact that there was no organized effort of the interested and responsible agencies of this country to effect needed improvements in the patent system.

Membership in the society is as set forth in Art. 3 of its Constitution which is as follows:

ART. 3.—MEMBERSHIP.

Sec. 1.—The membership of the society shall consist of honorary members, active members and associate members.

Sec. 2.—Every employee of the Patent Office whose official title comprises the word "Examiner", and also the Chief Clerk, the Librarian, the Draftsmen, and the chiefs of non-examining divisions and heads of rooms, shall be deemed eligible, on written application and payment of such dues as may be required, to active membership; and every active member shall be deemed eligible to hold any office hereunder. Others may become honorary or associate members. The requirements of associate membership shall be as the executive committee may determine. Proposals for election to honorary membership shall be referred to the committee on membership for report and upon favorable report the candidate

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may be elected by vote of the society. Applications for associate membership shall be passed upon by the committee on membership, and, in case of adverse action by said committee, the application shall be referred to the executive committee for final action.

Sec. 3.—Dues of active members shall be fixed by vote of the society and dues of associate members by vote of the executive committee. No dues shall be required of honorary members.

Sec. 4.—Non-payment of dues for an unreasonable time after notice of arrearage has been given shall be considered good cause for dropping a member's name from the roll by a vote of the membership committee.

While the members of the society as represented by its active membership is composed principally of examiners in the United States Patent Office, the provisions of associate membership are such as to permit representation by those having an interest in the objects of the society whether as attorney, engineer, inventor, manufacturer, or educator. Everyone so interested is earnestly invited to enroll as an associate member.

The society is now in its second year. In this short period considerable progress has been made toward the attainment of its objects. Numerous lectures of an educational character have been given in the third-floor auditorium of the office by technical men outside the office and in addition a series of lectures on the Rules of Practice and the principles on which the patent procedure rest, have been given by officials of the Patent Office, primarily for the education of recently appointed assistant examiners. A very important step forward has been taken through its affiliation with the National Research Council. This council was organized in 1916, at the request of the President of the United States, by the National Academy of Sciences as a measure of national preparedness.

In conformity with a request embodied in a resolution adopted by the society, and fully concurred in by the Commissioner of Patents, the council has appointed a committee for the study of Patent Office problems. The committee comprises some of the most noted American scientists, engineers, inventors, and authorities in patent law. It is also the intention of the society to become

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affiliated with other technical societies for such mutual benefit as may under the circumstances be possible.

The society is interested in the promoting of mutual acquaintance within the office and with those who have business before it; in the elevating of standards of practice; in the dissemination of information; in the improvement of working conditions, methods and equipment within the office, and in assisting efforts for patent reform, to the end that better patents may thereby be granted.

It is the vision and hope of the founders of the society that it may occupy the place in applied science, invention and industrial progress that other scientific societies have attained in their respective fields. They hope by so doing to increase the service that the Patent Office and patent system is able to render the nation. As a means to this end they desire to do all that comports with a due sense of official propriety to better conditions in the Office both as to business methods and working conditions in complete coöperation with the Secretary of the Interior and the Commissioner of Patents.

The possibilities in the field to which the society has committed itself are large. The objects which it seeks to attain are worthy of the best efforts and the coöperation of those who come in contact with the patent system.

The officers of the society are as follows: President, M. H. Coulston, Vice President, B. N. Morris, Secretary, B. Russell, Treasurer, A. W. Cowles, Members of the Executive Committee, W. F. Avery, N. J. Jewett, J. H. Lightfoot, G. A. Lovett, T. L. Mead, Jr., M. E. Porter, E. D. Sewall, and W. L. Thurber

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THOMAS JEFFERSON AND THE PATENT SYSTEM.

By Wm. I. Wyman.

The act of 1790 created the United States patent system. It provided for the filing of a specification and model with the Secretary of State. The patent was granted by a board composed of the Secretary of State, the Secretary of War and the Attorney General, who had discretionary power to allow or refuse the application,

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from which action there was no appeal. The act of 1793 suspended the first law and provided a registration system, in which compliance with certain formalities was all that was necessary to obtain the grant. The Secretary of State received the petition therefor, the letters patent being first signed by the President and being approved as to form by the Attorney General. Jefferson was Secretary of State during the entire, but brief, lifetime of the act of 1790. It was also said that he examined personally every application filed during the existenee of that act, and he may thus be credited with being the first Commissioner of Patents and the earliest patent examiner.

Jefferson was probably the most accomplished public man of his time. He had a thorough knowledge of the classics, was completely abreast of contemporaneous scholarship, was intensely interested in scientific thought, and, of course, was an advanced thinker in political and social philosophy. His interests were extremely diverse, but in no department could it be said to be superficial. His grasp of scientific subjects was deep and no advance in the arts and invention escaped his intelligent scrutiny. He was by birth and training an aristocrat, but through feeling and conviction became the world's leading liberal. Without Washington and Franklin it may be questioned whether this country's independence could have been achieved or this government launched successfully, but Jefferson is mostly responsible for the trend political thought has taken in this country; his, more than any other single influence, has given direction and quality to the streams of American public policy. While in France, representing the interests of this country, between 1784 and 1789, he displayed a keen interest in all the advances in the arts and sciences, and his correspondence shows that he was especially alive to the importance of the invention of the steam engine and the impending industrial era that was to follow in its wake. He was remarkably apt in the practical application of mechanical principles, as is shown by the fact that he was the first discoverer of an exact formula for the construction of mould-boards of least resistance for plows. Thus Jefferson was thoroughly equipped, both from the economic and the technical sides, to appreciate and inau-

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gurate the patent system. Yet, so saturated was he with the principles of republicanism, so suspicious was he of monopoly and any aggrandizement of power, that he was led initially and almost instinctively to oppose the introduction of any system of awards to inventors. But a mind so flexible as his, so receptive to new ideas and so responsive to the value of facts, could not but help bear testimony to the beneficence of patent protection once its virtues were demonstrable. He gave to the duties of examining applications all his knowledge, and all the thought and energy that could possibly be spared from the arduous duties of piloting the ship of state. The effects of the act of 1790 came under his own direct observation. Only a few months after the law was passed he was led to write:

> "An act of Congress authorizing the issue of patents for new discoveries has given a spring to invention beyond my conception. Being an instrument in granting the patents, I am acquainted with their discoveries. Many of them indeed are trifling, but there are some of great consequence, which have been proved of practice, and others which, if they stand the same proof, will produce great effect."

While President, in 1807, he wrote to Oliver Evans, famous as an early inventor, as follows:—

> "Nobody wishes more than I do that ingenuity should receive a liberal encouragement: nobody estimates higher the ability which society has derived from that displayed by yourself: and I assure you with truth, that I shall always be ready to manifest it by every service I can render you."

and in 1813 he wrote anent a patent of Evans which was the subject of considerable controversy, "My wish to see new inventions encouraged, and old ones brought again into useful notice, has made me regret the circumstances which have followed the expiration of his first patent."

Jefferson was apparently the most active member of the first patent board. His correspondence discloses the growth of the practice and the formulation of its principles, and gives a vivid appreciation of their details and effects. He enunciates while in a reminiscent mood cer-

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tain rules established by the board, such as that neither a mere change of material nor change of form should give title to an invention, and that (to use his own language) "it is the invention of the machine itself, which is to give a patent right, and not the application of it to any particular purpose, of which it is susceptible." These are now among the precepts of accepted practice and could only be uttered by one not merely learned in the law but vitally concerned in the progress of invention and in establishing a firm and philosophical basis for patent procedure.

Jefferson's concern in patent matters is exhibited in much of his correspondence, a particularly interesting example of which is his discussion of the philosophy of patent protection in one of his letters, which almost amounts to a treatise. After laying down what he considers the contribution in a patent to Oliver Evans for an Elevator, Conveyer, etc., he presents among other reasons for the invalidity of the patent the following anticipations in literature:—"Shaw's Travels", "Universal History", "Mortimer's Husbandry", "Ferguson's Mechanics", "Vitruvius" edition by Perrault, Bossuet's "Historie de Mathematiques", Wolf's "Cours de Mathematiques", Desagulier's "Experimental Philosophy" in Diderot's Encyclopedie, etc., "L'Architecture Hidraulique de Belidor," and Prory's "Architecture Hidraulique."

This formidable list of citations is a monument of research, a characteristic bit of work, and entitles the first examiner of patents to a place among the first of patent examiners.

THE RELATION OF THE EXAMINER TO THE INVENTOR AND HIS ATTORNEY.

By F. W. H. Clay, Assistant Commissioner.

(Delivered before the fourth assistant examiners.)

Let me first call your attention, gentlemen, to the fact that in your duties in this office you are in a very peculiar position, a very unusual position, which makes it

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highly important that you have a correct conception of your proper mental attitude toward your work. In a word, you are in the anomalous position of being both the judge and the attorney for one of the parties in a controversy. You know that it is a fundamental principle of our system of government, that the judicial branch be entirely divorced from the legislative and the executive branches. It has from time immemorial been a settled principle that a judge should be uninterested in either of the parties to the contest. The face is that the patent law, by reason of the peculiar nature of the property with which it deals, is seemingly out of harmony with the democratic theory of government. And yet the condition is inevitable. What I wish most to impress upon you, is that the seeming inconsistent attitude of the examiner is one of seeming only, and that when looked at from the right point of view the interests of the inventor, his attorney, and the examiner are, or should be, substantially one and the same.

Let me try to explain why this is so, and how it results from the nature of the property in inventions. The point will appear from a careful consideration of the reason for the patent law.

The Constitutional provision for patents is one of those pieces of literature like Milton's Paradise Lost, which everybody talks about and nobody reads with sufficient particularity. You will all remember that the Congress is given power to promote the progress of science and the useful arts; and that the method by which this is to be done is set forth, not by saying directly that invention is to be encouraged, but by providing for it indirectly, saying that inventors are to be secured for a limited time in the exclusive right to their discoveries. A thing that is frequently overlooked is that the whole system has the single and sole object of *promoting progress.* You must particularly note the word "*promote.*" If I leave but one impression on your minds today I would like that impression to be the thought that promoting *progress* necessitates a prompt disclosure of the invention, not to the Patent Office, but to the public.

To state it another way, it will not do to merely encourage inventors by securing them in their rights; another thing quite as important—and I think this is the

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thing usually overlooked—is that the inventor must be required to teach the public the use of his invention at the earliest possible time. I think we have never half realized the extent to which the publication of an invention stimulate other inventions, brings about improvements in methods of manufacture, supplies manufacturers with forethought and extended vision, and cultivates in the public mind a taste and desire for new and better things. I dare say if the public generally knew how perfectly feasible an automatic telephone exchange is in the light of present knowledge, the people would not longer put up with the cumbersome methods that we now endure. Business is essentially conservative. It is the natural instinct of the business man to get along with what is good enough as long as it satisfies the public demand, and to take up new and improved things only when there is a public demand for them. This is perfectly natural, because the process of evolution in the industrial arts necessitates the waste of discarding the old and the obsolete.

In a word the inventor is the evolutionary force, while the business instinct of the manufacturer who puts his invention to use is an element of inertia against which the inventor must continually struggle. It is therefore hardly less important to encourage inventors to make inventions than it is to encourage business men and the public to take up inventions and put them to use. As a single instance I remind you that the phonograph was invented in 1876, before many of you were born; and yet doubtless every one of you can recall when the first extended use was made of phonographs years thereafter. All that ten or fifteen years' delay was wasted, and progress was held back, because of the mental inertia and business inertia of the people.

To come then, to the nature of the inventor's right. In the first place it is important for you to understand clearly that the inventor does not come to the government seeking favors. I do not hesitate to say that the inventors as a class are by all odds the most important class of people, and by all odds the best benefactors of the race. I do not even expect the noble profession of medicine; for it is certainly more important to create than it is to preserve. The inventor is the agency for evolution of

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the industrial arts. A great invention, in the language of Judge Buffington (Brislin v. Carnegie Steel Co., 118 Fed. Rep., 589), "may arise to the dignity of the humane," when measured by its beneficent results.

Lord Bacon said (Novum Organum, Book 1, Section 129):

> "Now among all the benefits that could be conferred upon mankind, I discovered none so great as the discovery of new arts for the bettering of human life. For I saw that among the rude people of early times, inventors and discoverers were reckoned as gods. It was seen that the works of founders of States, lawgivers, tyrant-destroyers, and heroes cover but narrow spaces, and endure but for a time; while the work of the inventor, though of less pomp, is felt everywhere, and lasts forever."

It is true that the motive and reward of the inventor is monetary; but it is nevertheless true, as Judge Grosscup said in Westinghouse Air-Brake Co. v. Chicago Brake & Mfg. Co., (85 Fed. Rep., 794) that—

> "Inventive genius has given to mankind most of its present material civilization. The magnificent flower of civilization, everywhere surrounding us, has opened from germs that were fructified from the brains of inventors."

Moreover, each invention is inevitably the seed of future inventions. Even though it is itself never used, its influence never ends. There is never any possibility of stepping backward in the progress of knowledge, no matter how small the improvement.

Inventors being benefactors of the race, and coming, when they seek a patent, with something to offer the public and not something to ask, it is next important for you to keep ever in mind the nature of the thing the inventor seeks. I think it is very unfortunate that the word "monopoly" was ever applied in any way to the right an inventor has or to the right he gets by his patent. A monopoly is an exclusive enjoyment of something which otherwise would have been the property of the public. But it can never be said that the invention would otherwise have been the property of the public. The most patent fact is that but for the inventor the public would not even know of the existence of the invention, much less have a right to it. And just here is where you should draw your line between the work of the inventor and the

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work of the mechanic. Of a new and an improved thing which a mechanic can produce we can never say that but for him the public would not have had it; but on the contrary it is altogether probable that whenever any desire for it is conceived, the improvement will be forthcoming. Therefore to patent anything which a mechanic could produce is indeed to grant a "monopoly," and it is vicious in every way. It is vicious not only because it takes away from the public something that belongs to the public, but it is vicious because it puts the inventor—the introducer of new things—on the same level with the mechanic, who is a mere applier of old knowledge.

Early in the history of our law the courts recognized the true status of the inventor, very well described by Justice Clifford in Seymour v. Osborne, (11 Wallace, 533):

> "Letters patent are not to be regarded as monopolies, created by the executive authority at the expense and to the prejudice of all the community except the persons therein named as patentees, but as public franchises granted to inventors of new and useful improvements, for the purpose of securing to them, as such inventors, for the limited term therein mentioned, the exclusive right and liberty to make and use, and vend to others to be used, their own inventions, as tending to promote the progress of science and the useful arts, and as matter of compensation to the inventors, for their labor, toil and expense in making the inventions, and reducing the same to practice for the public benefit, as contemplated by the Constitution and sanctioned by the laws of Congress."

It is not strange that the general run of laymen still persist in the notion that a patent grants the patentee the right to use the invention; for that was indeed literally the nature of the earliest English patents. In the thirteenth century patents nearly always had two clauses, one of which granted the right, and another of which excluded the infringer. We still cling to the hollow form in our patents themselves, and I hope to see them reformed in this respect. The patent says that whereas John Doe has presented to the Commissioner a description of his invention and is adjudged entitled to a patent, therefore the patent "grants unto said John Doe the exclusive right to make, use and vend, etc." The fact is the Government does not grant John Doe anything at all. The right to protection in court is given indeed, but in a moral sense he even had the right of exclusion, and therefore

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the remedy for it was his. What the patent really grants is the privilege of publicly diclosing the invention *without* losing control over it. If I conceive a poem, it is mine by right of creation. Nobody has any conceivable right to it. Nobody but me has any power over it. It is completely in my control. The moment, however, I write it on a piece of paper where others can see it, or stand on a street corner and recite it where others can hear, my control is gone and in the absence of the copyright law my power, and in a legal sense, my right to control it is gone. What the copyright gives me is the power to substitute control by the court in place of my own personal control, which latter involved keeping the poem to myself. It is very much the same condition with an invention, for there was no provision in common law by which after I had allowed somebody to see my newly invented machine I could prevent him from proceeding to make and use one for himself. The patent simply empowers me to substitute the control of the court for my own control, so that I may now publicly disclose the invention without losing my control of it. This is for the public benefit as much as my own.

Let me point out here a radical difference between the copyright and the patent. An author does not create his work for any other purpose than to disclose it to others. He can make no possible use of it except by disclosure to others. An inventor, however, does not primarily make his invention for the purpose of disclosure to others, but for the purpose of using the invention, to get some result he is after. He is not without control when he uses his invention. He may very easily make full use of his invention for many years without disclosing it at all and without losing complete control over it. Now, it is just this possibility which makes it more important than is generally recognized, that the law should encourage the inventor to disclose. I think it is largely on account of this condition that the patent is truly said to be a contract. The disclosure is the consideration the inventor gives for his patent. There is luckily a case lately decided which clearly illustrates the point—the case of Macbeth Evans Glass Co. v. General Electric Co., 231 Fed. Rep., 183, lately affirmed by the Sixth Circuit Court of Appeals, November 6, 1917, but not yet published.

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The glass art is one of those arts in which the "secrecy habit" has prevailed from the earliest times. Glass mixes were always mysteries, carefully guarded and handed down from father to son for generations. The principles of mixing glass are complicated and little understood; chemists have rarely dealt with it. We do not know even yet whether glass is a mechanical mixture or a chemical compound. It is probably both; but its laws are not definitely known.

Macbeth invented in 1903, and completed and put into practice, a method of making what is called "Alba" glass. He proceeded thereafter to make and sell large quantities of the glass at great profit. He contributed very largely to the improved modern practice of indirect lighting of buildings, and mainly by this invention. Fortunes were made out of the sale of the glass. He kept the invention secret for nearly ten years and then lost his secret only by the treachery of one of his employees. He succeeded, by suit in the State Court, in enjoining this employee and his associates from using the secret process, but afterwards, in 1913, he applied for and obtained a patent, which the court has now rightly held to be invalid. The thing that interests us is the reason why. You will find Judge Clarke's reasoning in that case very illuminative, although the Court of Appeals does not seem to agree with him that the use of the invention was public, and both courts have by reason of the wording of the statutes been obliged to conclude that "the *invention* had been *abandoned*", whereas it is clear that it was not the invention that was abandoned, but the claim of right Macbeth had to a patent.

Judge Clarke points out that in order to promote the progress of the art of glass making, it was necessary for Macbeth to disclose his invention and give the public at large the right to use it at as early a date as possible, without losing his own rights as an inventor. He quotes Justice Story, to the effect that by his delay and holding back knowledge from the public he had *refused to perform his part of the contract;* wherefore to grant him a patent would retard the progress of the art, and "give a premium to those who would be least prompt to communicate their discoveries." In other words, if Macbeth's patent had stood, he would have had a monopoly

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of his invention, not for seventeen years but for twenty-seven years, and would have thus retarded the art of glass making. It is also a constantly recurring thought in the minds of our modern judges that in the natural course of the evolution of the arts it may be reasonably presumed that in time developments will gradually take place by the efforts of mechanics, or at least that if one inventor does not hit upon the next step in the progress, some other will. In this particular case it happened that Macbeth's invention was contemporaneous with the introduction by architects and others of a new system of lighting which it may not be entirely unreasonable to presume would have inevitably led to the making of some kind of glass which had the general properties of the Alba glass of Macbeth's invention. The natural evolution of the art would have almost compelled the invention of this kind of glass, and this probably within a period of twenty-seven years; so that even without Macbeth's invention it is not at all improbable that the invention would have been made within the period through which Macbeth undertook to monopolize his invention.

The importance of keeping in mind a clear conception of the contract theory of the patent is that we may never lose sight of the primary object of the patent system to promote the evolution of the art. The real consideration the inventor gives the public for the privilege of using the public courts to keep infringers off his preserves for a limited time is the prompt disclosure of the invention, which is, as I said before, the sowing of the seed of further improvements. I think indeed this is quite as important as the advancing of the time when the invention is to become public property. I am not sure that the majority of inventions are not superseded, before the termination of the seventeen year period of the patent, by other inventions which substantially displace them. This, of course, is not true of pioneer inventions, but is true of many subsidiary inventions.

With the greatest respect to the court I venture to say, nevertheless, that it was unfortunate that in this Macbeth case, which as the Court of Appeals said was *sui generis,* the court did not boldly take a broader ground than saying that Macbeth abandoned his invention, and say that promptness of disclosure is the primary

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consideration the inventor gives for the patent, and that when he deliberately delays the disclosure for a selfish purpose he forfeits his right to the privileges the patent gives. Judge Clarke in the court below well expressed it thus, speaking of Macbeth: "To decide * * * * * * not to accept the benefit of the patent laws, but to rely upon the trade secret law for protection of an invention, is as clear an abandonment by him of the privileges and obligations of the patent law as the abandonment of its advantages in any other manner would be." The reason why Macbeth was not entitled to a patent was not that he had abandoned his *invention,* but that he had refused to give to the people that thing which was the consideration for his patent.

The British Courts often invalidate a patent for not stating definitely all the essentials to success in using the invention, as for example specifying an iron roller coated with clay and not pointing out the kind of clay which was proper when there was a kind that would not do. (Weyman vs. Corcoran, L. R. 13 Ch. D. 66.) Frost, p. 175. And further, his patent will be bad if he merely suppresses or omits to state the best way to work the invention. (Frost, p. 183; Titly vs. Easton, Mac. P. C. 48; and Liardet vs. Johnson, 1 W. P. C. 53.)

This brings me to the main point I wish to make, namely, that however it may be with the business man, it is of supreme importance to the inventor and to the public that patents be both *applied for and granted promptly.* Coming directly home to you, this means that one of your primary duties is to see that when applications are filed in this office they proceed without delay to patent. It is quite possible that promptness in the work of this office is as important as thoroughness. In other words, if you have to choose between making a less thorough examination and a general and material delay in getting the applications through, it is probably more to the public interest that the prosecution be prompt. At least I am justified in saying that if your examination is not sufficiently thorough, this is directly the fault of Congress, and is so provided in spite of the attention of Congress having been repeatedly called to the shortness of force and the necessity of an examination that is not sufficiently thorough. I have been an inventor, and I think myself,

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(and believe it wise to say so) that the inventor at the present moment is not getting the examination he actually pays for. I base this statement on the single fact that the Patent Office is a money-making institution, at the expense of the inventor. The inventor pays a certain number of dollars for an examination of his invention. He does not get that number of dollars' worth of examination. On this point there can be no dispute, nor can there be any dispute that it is because this office is undermanned.

Accepting this condition, however, as we must, it is our duty to keep the work up to date and to constantly press for prompt prosecution and issue of patents. It seems to me an axiom that when we are engaged in the act of recording, measuring, and promoting industrial evolution, any delay on our part delays the evolution, which is the great object and end of the patent system.

If you have agreed with me about the point of view you should take toward the patent law and the Patent Office, you will see that the general impression that the attorneys are arrayed on one side and examiners on the other of a never-ending series of controversies, is entirely erroneous, and that it is due to a wrong impression of what we are all trying to do. We are in fact all attorneys for a public benefactor.

The examiner, the inventor, and his attorney should all be in perfect harmony and sympathy, because they are all seeking the same object. It is not as if you were the attorney for the public, sitting down to draw up a contract between the public and the inventor by which each party must jealously guard lest his client give more than he receives, but you are rather in the position of an engineer who in conjunction with the inventor and his attorney is trying to correctly measure the height of a new step added to the flight of steps of progress in industry. It is to the mutual interest of all three that the measurement be correct, and that the step be set solidly in place. If the inventor gets a claim which is too broad, he may lose all, and is more injured than anybody else; and if he gets a claim that is too narrow, everybody is injured. What all three parties are trying to do is to compare the new invention with what went before it and see that the difference, or the upward step in the progress, is accur-

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ately measured and clearly defined. The attorney ought not to resist the criticism of his specification or claims; for a criticism cannot possibly do harm and almost invariably does good. On the other hand, the examiner ought not to resent criticism of his reasoning or his point of view, for the attorney by challenging the examiner's action will probably show in just what respect the examiner's contention is weak and needs to be strengthened in order to properly fix the patent in its proper place in the art.

Remember that every patent is a step in a flight of stairs. There are steps below it and there will inevitably be steps above it. And the steps above it will rest upon it. No flaws in it should go uncriticized; no measure applied to it by the examiner should claim immunity from challenge. It is said that Lincoln never quarreled with anybody face to face; that it was not possible to quarrel with him, because if you criticized him justly he would be the first to exhibit a desire to correct the fault. To answer back criticism in kind never improves matters. Acknowledging a fault almost invariably puts an end to criticism. It is related of Dr. Johnson that a witty lady, a celebrated blue stocking, laid a careful plan to embarrass him at a dinner at one time, having found a misspelled word in his dictionary. At the psychological moment when everybody could hear she said: "Dr. Johnson, why do you spell the word so-and-so in your dictionary?" He instantly replied, "Plain ignorance, madam. At that time I did not know any better." The discussion naturally ceased at this point, much to the embarrassment of the lady and much to the enjoyment of Dr. Johnson.

It would be well for the examiners to remember just what experience the practicing attorney has.

The good attorney will always, at one time or another, ask and get from his client a full answer to these three questions:

1. What is it you are going to do?
2. Just how, and in particular, do you do it?
3. What advantage do you thus secure, over what others have done before you?

These also are the questions the examiner must ask and answer. And he must see that they are answered

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fully and truthfully, as if the patentee were trying in good faith to instruct the ordinarily skilled how to use the invention. And then he must see that the claim defines the difference from the old art very clearly. Although the specification must inevitably describe some things which are old, the law makes it imperative that the patentee shall make clear just what is old and what new.

Now in all this, it happens that the examiner as attorney for the public insisting on the claim exactly measuring the extent of the step up—the improvement—is doing exactly the same thing as the attorney for the inventor is doing, marking out the limits of the forbidden field covered by the patent. In setting the fence around the invention it is as much the interest of one as of the other to put it in the right place. The inventor comes in to the attorney full of enthusiasm and discloses to him an invention which he says is all new and very important. The attorney says, "Let us be sure just how new; let us make a preliminary examination." He makes a preliminary examination, which of course is very imperfect, and then he proceeds on that basis to state in his specification first what the object of the invention is, then that heretofore that or like objects have been sought in a certain way but fell short in certain respects, and that the present applicant succeeds in accomplishing the improvement which is his object in the following way: whereupon he describes it. He then claims what he thinks is the measure of the improvement. Being aware that his search was uncertain, and with the object of bringing out a better search from the examiner, having regard to the invention in both its broad and narrow aspects, he writes usually some very broad claims and then some more specific ones. In view of the light he has at the time he writes his specification it is altogether likely that he will have too many claims, and that he will have some claims that are too broad. If he is a good attorney he will have done this deliberately, in order to get the advantage of the examiner's point of view.

The examiner should reply in full consciousness of the mental attitude of the attorney and as near as possible in a sympathetic spirit. If he says claim 1 is too broad, he should show as fully as he can how much of the variety of previous devices his claim would cover; and among

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these references he should always attempt to have the one he considers his best reliance for rejecting the narrowest claim he will reject. If it occurs to him how it may be done, he should suggest what appear to him the principal novel points of the invention. But in the next action by the attorney he may expect to find a different view as to what is the most important point of the invention and he should not be irritated at being told that his own point of view is wrong. The examiner should constantly keep in mind that whereas he approaches the consideration of the invention from the point of view of the gradual development with which he is familiar and therefore unconsciously will look for the next step along the same known line of development, the majority of inventors probably are not those who have followed any such course, but have struck out in a direction unguided by knowledge of the previous course of development. As I once heard an inventor say, the examiner ought not to expect the inventor's mind to run on the track like other men's, for if his mind ran on the track he would get nowhere except where the track led. The attorney for the inventor also is liable to have a still third point of view, being more familiar with the business aspect of the invention. The great thing is to get a mutual accommodation of the three points of view, and in order to do this it is necessary to constantly strive to maintain a sympathetic attitude. What the inventor does is to evolve and apply an idea. So long as the main idea and its significance are uppermost in his mind, he is liable to be erratic in the choice of means of embodiment, nor is it necessary that he even choose the best means at hand. The examiner will be often surprised and perhaps nettled at the inventor's peculiar method of expression, but he must not let this get his mind off the main thought of the invention. Most of the controversies arise between the attorney and the examiner over the pertinency of references, and this is due to the variant directions of approach above mentioned. The examiner ought to be willing to listen to every contention the inventor's attorney may make, if for no other reason than to test the correctness of his own judgment.

Another thing the examiner should guard against is confusion in the use of the terms in an argument. Socra-

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tes once said, "Define your terms and all argument will cease." Of course many arguments are carried on in an effort to arrive at a common understanding of the terms in use. The examiner will find many difficulties will disappear when he makes due allowance for the fact that he is of necessity using the terms familiar in the art as it has heretofore developed, whereas the inventor in the nature of the case will not use the same terms in the same sense, because he is not as familiar with the development of the art. The examiner can be very helpful by explaining the ambiguity and indefiniteness of terms used by the inventor, and it is his duty always to be a helper.

On the other hand, there is one point of continual quarrel between attorneys and examiners, upon which I think the examiner should stand firm and with respect to which I think his standing firm will be of the greatest aid to the inventor. This is the matter of definiteness of claim. It is perfectly natural, and is almost the universal custom, that an attorney will undertake to write a set of claims so as to anticipate now-unthought-of variations of the applicant's invention. He will try to write one claim in one set of terms and another claim, *to the same thing,* in another set of terms, just because he is conscious of the variant qualities of minds he will find in the courts. He will not be so much concerned with making a clear definition of the invention as in anticipating future infringements. That is, he will try to write a set of claims so that he can pick out one to fit the device of some one particular infringer and some other claim designed to fit the device of another infringer who has a different form of apparatus. Widespread as this custom is I am satisfied that it is both unlawful and unwise from the standpoint of the patentees' interests. If the statute says one thing more emphatically than any other it is that the inventor shall definitely point out what his invention is. It clearly contemplates that the inventor shall leave to the court to decide whether that invention is found in the defendant's device. The court will not, and it ought not, to merely try whether the terms of the claim define the defendant's device. The terms of the claim might do so when there is no infringement at all, and on the other hand, the terms of the claim might fail to do so

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when there is clearly an infringement. For example, the court will hold that a pyramidal car body is a conical car body, if it is necessary to sustain a good patent against a real infringer (Winans vs. Denmead, 15 Howard, 330); and on the other hand, it is a very common experience to find a claim literally reading on the defendant's device and yet no infringement. The court ought not to be put in the position of saying that *if* this claim is construed so-and-so it is not valid, and *if* it is construed in another way it is not infringed. The claim ought always to be construed on the disclosure of the patent and be capable of no other construction, leaving open a pure question of equivalency to decide. If this is kept in view by the examiner and the attorney it will inevitably result that the claims are definite and that they are few in number. Once given a distinct and properly definitive claim, the presence of any other claim to the same subject-matter will simply confuse the patent. The examiner can bring about a great reform in this respect by firmly rejecting all claims that do not differ from other claims in a real and patentable feature; and he can very often state the matter to the attorney in such a way as to make it clear that the patent is stronger by having a set of claims which, taken together, are definite.

Finally allow me to impress upon you the beautiful simplicity of our patent law when rightly understood. Judge Butterworth is credited with having said, "Patent law is the metaphysics of the law." I never liked that expression and I do not believe that it is just. The word "metaphysics" implies something complicated if not occult and mysterious. Some cynic said that "Metaphysics is a blind man hunting in a dark closet for a black hat which is not there." The patent law, on the other hand, is perfectly simple. The reasons for it are perfectly simple. Its methods are perfectly simple.

The extremely fortunate point about our patent law, and the feature which gives it its great efficiency, is the arrangement by which the inventor's' reward depends directly upon how much good the invention does to the world. If the invention fills a want, the inventor grows rich. If it is not wanted, he gets nothing. His return, at least theoretically, is the measure of the demand for his invention, and you will notice that the demand for the

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invention should be a measure of the need of protection for it and therefore of the value of the patent. It is the function of the Patent Office to simply measure the degree of novelty the inventor has found. The public will measure the value of that degree of novelty. But the Patent Office is also to see that the inventor actually gives the public a clear disclosure of his invention in such a way that it may not only use it but that it may know just what are its limits within which an imitator cannot enter. And his disclosure and delimitation of the invention is to be made promptly, if it is to fulfill the intended function of the patent system. The examiner ought to exert every effort to get through with the matter of prosecuting an application. To this end the most important thing is that the examiner's first action should be thorough, not arguing the case but deciding it, and giving briefly the best reasons. His next best action is to insist that the inventor's attorney shall make a real response to the office action and avoid dilatory tactics. I think you ought to be reminded, and I think you ought to be constantly reminded, that you have the right under the law to express your opinion as a judgment, and often to base it on broad grounds. If you will keep in mind just the questions the court will hereafter have to decide in considering and applying a patent, you will be able to make your rulings in such form that the attorney may either agree with them or be in condition to appeal without further argument. Above all, you should never relax the requirement that the patent must be plain and simple, the disclosure complete, and the delimitation of the step up accomplished by the invention, clear. You may easily write your letters so that the attorney will see that the criticisms are for the benefit of the applicant, and having done this once there ought not to be further argument about it, although you should be perfectly willing to withdraw a criticism when shown that it is unjust.

Of course all I have said is based on the supposition that the attorney is honestly striving to protect the interests of the inventor. When it comes to the attorney who is not honest, what I have said about sympathy will plainly suggest to you that there ought not to be any sympathy between you and him, and here especially there should be a quick and decisive action taken and further

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disposition of the case left to higher authorities on appeal. You can do no greater favor to the great mass of inventors and to the majority of the attorneys who are well meaning than to call the Commissioner's attention to every instance you find of a breach of professional ethics. I think the time cannot be long delayed when the ranks of the patent profession will have to be purified in order to prevent serious injury to the public interests as well as to the inventors as a class.

RULES 1 TO 16 INCLUSIVE.

By A. D. Merritt, examiner.

(Delivered before the fourth assistant examiners.)

The subject of my lecture involves Rules 1 to 16 inclusive of the Rules of Practice in the Patent Office. And since it has fallen to my lot to deliver the first lecture on the Rules, it has occurred to me that it would be appropriate to deviate from my text for a minute to mention the authority on which the Rules are based and the value of a clear conception of their import.

The authority for the Rules of Practice is found in Section 483, of the Revised Statutes of the United States, and is as follows:

> "The Commissioner of Patents, subject to the approval of the Secretary of the Interior, may from time to time establish regulations, not inconsistent with law, for the conduct of proceedings in the Patent Office."

The Rules are as nearly in conformity to the Statutes, the decisions of the several Commissioners, and the courts as it is possible to make them. As they now stand they are the work of competent revisors of long experience and high standing in the Patent Office. A clear understanding of the Rules will greatly assist you to facilitate and do good work in the office and will be of much benefit to you should you ever desire to become successful practitioners before the office. Hence, I can not urge upon you too strongly the necessity of a complete and intelligent understanding of them.

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1. All business with the Office should be transacted in writing. Unless by the consent of all parties, the action of the Office will be based exclusively on the written record. No attention will be paid to any alleged oral promise, stipulation or understanding in relation to which there is a disagreement or doubt.

It is a wise idea to keep the provisions of this rule in mind for one reason if nothing more. The courts in determining the scope and validity of claims as a rule take into consideration the record in the prosecution of the case in this office. Consequently you can readily understand the advantage for all parties concerned in having the written record complete. Even when agreements or understandings are reached at interviews, especially relative to the allowance of claims, it is always advisable to insist upon the reasons advanced being placed in the written record of the case.

2. All letters must be sent in the name of the "Commissioner of Patents." All letters and other communications intended for the Office must be addressed to him; if addressed to any of the other officers, they will ordinarily be returned.

The object of the rule is two-fold; first, the Commissioner is the responsible head of the office, consequently all office letters should be sent in his name; second, all letters and communications for the office should be addressed to the Commissioner as the responsible head to avoid confusion. If this rule is followed communications and papers received in the office can be forwarded to the proper division promptly and without delay.

3. Express charges, freight, postage, and all other charges on matter sent to the Patent Office must be prepaid in full; otherwise it will not be received.

The office cannot take the responsibility of advancing money to pay such charges. If the office should follow this practice it soon would have a large number of bad debts on its hands. Furthermore, the office has no fund for this purpose.

4. The personal attendance of applicants at the Patent Office is unnecessary. Their business can be transacted by correspondence.

The main object of this rule is to save applicants the expense incurred by reason of journeys to Washington.

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Also the personal attendance of applicants at the Patent Office is apt to take a good deal of the examiner's time, consequently retarding the business of the office.

5. The assignee of the entire interest of an invention is entitled to hold correspondence with the Office to the exclusion of the inventor.

When an assignment of the entire interest of an invention has been made, the entire invention involved belongs to the assignee, consequently the assignee, by right of his ownership, should have the exclusive control of the prosecution of the application. However, to avail himself of the benefit of this rule the assignee must assert his right to prosecute the application. This should be done in writing and should be made a part of the record in the case. Then the assignee stands in the shoes of the inventor relative to his rights in the prosecution of the application. If there is an attorney in the case who obtained his power from the inventor, the assignee after asserting his right should ratify that power or revoke that power and appoint an attorney, if he wishes to be represented by one, of his own selection as provided for in Rule 20. However, even should the assignee fail to ratify the power given by the inventor or appoint an attorney of his own selection, the office will presume that the power given by the inventor is satisfactory to the assignee and continue to recognize the attorney appointed by the inventor.

6. When there has been an assignment of an undivided part of an invention, amendments and other actions requiring the signature of the inventor must also receive the written assent of the assignee; but official letters will only be sent to the post-office address of the inventor, unless he shall otherwise direct.

The object of this rule is to protect the interest of the assignee. In other words to prevent the inventor from disposing of the interest of the assignee without the assignee's consent.

There are seven instances wherein the signature of the assignee of an undivided part of an invention is required; they are:

1. **Petitions for the reissue of patents. Rule 86.**

2. **Disclaimers of the subject-matter involved in interferences. Rule 107.**

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3. Concessions of priority of invention to end interferences. Rule 125.

4. The written declaration of abandonment of an application. Rule 171.

5. Disclaimer embodied in original or reissue applications as first filed or subsequently amended referring to matter shown or described, but to which the disclaimant does not choose to claim title. Rule 182.

6. The written declaration of abandonment of an invention involved in an interference. Rule 125.

7. Revocation of the power of attorney in which the assignee has joined in the original power of attorney. Ex parte Anderson C. D. 1893, page 12.

7. When an attorney shall have filed his power of attorney, duly executed, the correspondence will be held with him.

A double correspondence with the inventor and an assignee, or with a principal and his attorney, or with two attorneys, can not generally be allowed.

The first paragraph of this rule needs very little explanation. The function of the attorney is to prosecute the application before the office; therefore all correspondence relative thereto by the examiners should be with the attorney.

The second paragraph relating to double correspondence is quite important. The object sought to be accomplished by this part of the rule is to prevent the record from becoming confused, unnecessarily prolix, and delay in reaching final determination of the question in issue, any one or all of which might occur if double correspondence were permitted.

You can readily comprehend what the result would be if two parties who have no way of knowing what the other is doing, were permitted to amend an application. The result would probably be a confused and badly mixed record. Or suppose you have an application wherein two parties having entirely different views as to the patentable novelty involved and in amending each should try to undo what the other had done; this procedure would make it rather difficult for the office to bring to a proper termination the prosecution of the application that would be just to all parties concerned.

There is one decision bearing on this rule I desire to bring to your attention, as the necessity to use the practice therein laid down is apt to occur at any time, and that is ex parte Jewett, C. D. 1887, page 17, wherein prin-

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cipal powers of attorney were given to two independent firms, but the applicant failed to designate with which firm he preferred the office to hold correspondence. The Commissioner held that the applicant should have designated the firm with whom he wished the office to hold correspondence. If no designation is made, and one of the firms resides in some other city than Washington, and the other one is located in Washington, which was the fact in this case, the office will hold correspondence with the local firm because it is more convenient.

In connection with this rule it is well to call your attention to an order of Secretary Lane, dated Dec. 2, 1916, wherein he asked that all official correspondence be "short, simple, and cordial."

Also it is well to keep in mind Commissioner's order #2047 of Apr. 30, 1913. This order directs that in applications where the power of attorney is given to a party who is not registered, as required in Rule 17, the first official action on the application shall be mailed to said attorney, who at the same time shall be informed that no further correspondence will be had with him, nor will any communication he received from him, until he shall have been properly registered.

I wish also to call to your attention the notice of Jan. 30, 1918, of Commissioner Newton, relative to official letters in applications wherein perpetual motion is involved. For further information concerning this order I would suggest that you read the order. Copies of the same have been recently filed in each division of the office.

> **8. A separate letter should in every case be written in relation to each distinct subject of inquiry or application. Assignments for record, final fees, and orders for copies or abstracts must be sent to the office in separate letters.**
>
> **Papers sent in violation of this rule will be returned.**

The object of this rule is to facilitate the work of the office and avoid confusion. Assignments are recorded in Division D; final fees go to Division B; orders for printed copies of patents to Division F; orders for abstract to Division E; amendments for drawings to Division C; and amendments for applications to the various examining divisions. From this statement you can readily understand the delay and confusion that would arise if orders and amendments for two or more of these divisions were included in a single letter or paper.

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9. When a letter concerns an application, it should state the name of the applicant, the title of the invention, the serial number of the application (See Rule 31), and the date of filing the same (See Rule 32).

The reason for this rule is to enable the office to promptly identify the application concerned.

10. When the letter concerns a patent, it should state the name of the patentee, the title of the invention, and the number and date of the patent.

The same reasoning applies to this rule that was given in connection with rule 9.

11. No attention will be paid to unverified *ex parte* statements or protests of persons concerning pending applications to which they are not parties, unless information of the pendency of these applications shall have been voluntarily communicated by the applicants.

The question of patentability is *ex parte* in character and is one between the applicant on the one side and the office on behalf of the public on the other side; and no one member of the public can be recognized as having such an interest in the grant of a patent as to entitle him to contest the matter any further than to call attention to the matter which he considers a bar.

If in a protest, tangible matter is presented, as a publication, which in the opinion of the examiner is a good reference for the invention involved, there is no good reason why the office should not use the same as a reference against the invention.

12. Mail reaching the post-office at Washington, D. C., up to 4.30 p. m. on week-days, excepting holidays, and 1 p. m. on half-holidays, is entered as received in the Patent Office on the day it reaches the post-office.

Special-delivery letters and other papers may be deposited in a box provided at the watchman's desk at the F street entrance of the Patent Office up to midnight on week-days, including holidays, and all papers deposited therein are entered as received in the Patent Office on the day of deposit.

Letters received at the office will be answered, and orders for printed copies filled, without unnecessary delay. Telegrams, if not received before 3 o'clock p. m., cannot ordinarily be answered until the following day.

The several provisions of this rule are for the purpose of preventing applications from becoming abandoned by reason of amendments not being filed in the office within the time allowed by law, or allowed applications from be-

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coming forfeited for lack of payment in the office of final fees within the six months allowed by the Statutes, which by oversight or some unavoidable delay could not reach the Patent Office during office hours.

The rule as I have read it is as it should be and includes an amendment not found in the printed copies. The amendment was published June 20, 1916, 227 O. G. page 747, and is as follows:

> insertion of the words *on week-days, including holidays,* after "midnight", in line 3, of the second paragraph.
>
> 13. Interviews with examiners concerning applications and other matters pending before the office must be had in the examiners' rooms at such times, within office hours, as the respective examiners may designate, in the absence of the primary examiners, with the assistant in charge. Interviews will not be permitted at any other time or place without the written authority of the Commissioner. Interviews for the discussion of pending applications will not be had prior to the first official action thereon.

You will observe that the rule designates no fixed time, other than during office hours, for interviews, and has very wisely left the designation of the specific time therefor within the discretion of each examiner. Under this arrangement examiners are enabled to fix the time to avoid interruption while hearing cases, looking over their letters and other routine work.

> 14. The office cannot respond to inquiries as to the novelty of an alleged invention in advance of the filing of an application for a patent, nor to inquiries propounded with a view to ascertaining whether any alleged improvements have been patented, and, if so, to whom; nor can it act as an expounder of the patent law, nor as counsellor for individuals, except as to questions arising within the office.
>
> Of the propriety of making an application for a patent, the inventor must judge for himself. The office is open to him, and its records and models pertaining to all patents granted may be inspected either by himself or by any attorney or expert he may call to his aid, and its reports are widely distributed. (See Rule 196). Further than this the office can render him no assistance until his case comes regularly before it in the manner prescribed by law. A copy of the rules, with this section marked, sent to the individual making an inquiry of the character referred to, is intended as a respectful answer by the office.
>
> Examiners' digests are not open to public inspection.

The reason for the first paragraph is clear; the office cannot take the time, nor has it sufficient force to look up

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the information necessary to answer such inquiries. However, I wish particularly to call your attention to the last part of the first paragraph, namely, "nor as counsellor for individuals, except as to questions arising within the office."

This part of the rule gives the examiner authority to make suggestions relative to novelty which occur to the examiner during the examination of applications. Suggestions of this nature can be made with propriety and would frequently result in facilitating the prosecution of applications. Ex parte Donovan, C. D. 1888, page 100.

Further consideration of this rule is unnecessary other than a brief reference to the first sentence of the second paragraph. The office can not advise inventors to file or not to file applications for patents; this practice would be highly improper, by reason of the official knowledge of pending applications. Furthermore, should the office advise an inventor to file an application and finally reject the same for want of novelty, the office would soon be in hot water.

> **15. Pending applications are preserved in secrecy. No information will be given, without authority, respecting the filing by any particular person of an application for a patent or for the reissue of a patent, the pendency of any particular case before the office, or the subject matter of any particular application, unless it shall be necessary to the proper conduct of business before the office, as provided by Rules 97, 103 and 108.**

The method of procuring a patent through the Patent Office is a business transaction between the inventor on the one side and the public, represented by the Patent Office, on the other and as it is a wise rule to do business in confidence and secrecy the office has seen fit to follow this plan in dealing with applications for patents. If this course were not pursued and the files were open to the public I am of the opinion that the office would receive numerous applications for the same invention filed by unscrupulous people. The exceptions referred to, Rules 97, 103 and 108, arise in interference contests and will be fully brought to your attention later in this course.

> **16. After a patent has issued, the model, specification, drawings, and all documents relating to the case are subject to general inspection, and copies, except of the model, will be furnished at the rates specified in Rule 191.**

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Since a patent is a contract between the U. S. Government on the one side and the patentee on the other, the public has the right to know the full procedure of the prosecution of the application, from which the patent matured, before the Patent Office. Consequently, after a patent has issued, the record thereof is open to the public and copies of all or any part of the record may be obtained for the usual consideration.

RULES 17 TO 23 INCLUSIVE.

By H. C. Armstrong, examiner.

(Delivered before the fourth assistant examiners.)

Rules 17 to 23 inclusive have to do with the relations of applicants and attorneys to the Patent Office and of attorneys to their clients, so far as these latter relationships affect the Patent Office.

The appearance of patent attorneys in cases pending before the Patent Office is not based upon any patent statute but upon the general rules of agency in conformity with which the inventor, having appointed an attorney to represent him in his application for a patent, is bound by the acts of his agent so long as the latter acts within the law and without fraud.

The power of attorney is usually embodied in the petition in the following form:—

"and he hereby appoints John Doe, of New York, State of New York, his attorney with full power of substitution and revocation, to prosecute this application, to make alterations and amendments therein, to receive the patent, and to transact all business in the Patent Office connected therewith."

Under such a power he may prosecute the application in all lawful ways, substitute another principal attorney for himself, appoint an associate attorney or attorneys, and even sign a petition for the renewal of the application, if it become forfeited. (*Ex parte* Agee, 101 O. G. 1609 and LeBrou vs. Nix, 177 O. G. 771). Such a power, how-

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ever does not authorize him to cancel all the claims. (*Ex parte* Lasseell, 28 O. G. 1274).

Rule 17.

The first paragraph of Rule 17 is advisory in character, pointing out to the prospective applicant the desirability of obtaining the services of an attorney skilled in the prosecution of applications for patent. It is recognized that certain inventors, by reason of previous special training or by experience acquired by actual prosecution of many cases before the Patent Office, have attained the skill requisite for safely prosecuting their own cases, but these are the exceptions, the general rule being that he who prosecutes his own case is ill served.

When the examiner receives an application prepared by an applicant obviously not sufficiently skilled in Patent Office practice to properly conduct his own case he should tactfully call attention to the first paragraph of Rule 17. It not infrequently occurs that an inventor, by reason of poverty, is unable to employ the services of an attorney and must, perforce, handle his own case as best he may. In such case the examiner should, to the extent permitted by his limited time, assist the applicant so circumstanced to obtain claims commensurate in scope with his invention, whatever that may be.

The second paragraph of Rule 17 sets forth in detail what persons may be registered by the Patent Office to act as attorneys in prosecuting applications before it and the procedure for obtaining such registration. The paragraph is clear in its terms and need not be discussed save to point out, in addition to the persons excluded by implication from registry under paragraph (g) of this rule, certain persons who are by law specifically excluded from registration or from acting as attorney in specific cases.

Section 1782 R. S. provides that "no Senator, Representative, or Delegate, after his election and during his continuation in office, and no head of a department or other officer or clerk in the employ of the Government shall receive or agree to receive any compensation whatever, directly or indirectly, for any services rendered, or to be rendered to any person, either by himself or another, in relation to any proceeding, contract, claim,

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controversy, charge, accusation, arrest or other matter or thing in which the United States is a party, or directly or indirectly interested, before any department, court martial, bureau officer, or any civil, military or naval commission whatever."

The opinions of the Assistant Attorney General given in *In re* Bloch, 128 O. G. 457 and *in re* Eggan, 194 O. G. 951, hold that the granting of a patent is a matter in which the United States is directly or indirectly interested and that therefore the parties enumerated in the above statute are ineligible for registry as patent attorneys or to prosecute any patent cause as attorney.

Section 558 of the District of Columbia Code, published in 123 O. G. 659, provides that

> No notary public shall be authorized to take acknowledgments, administer oaths, certify papers, or perform any official acts in connection with matters in which he is employed as counsel, attorney or agent in which he may be in any way interested before any of the Departments aforesaid.

This proviso was construed by the Attorney General 127 O. G. 3642, to apply to all notaries who may practice before the Departments and not merely to notaries of the District of Columbia, and such construction was approved by the D. C. Court of Appeals in Hall's Safe Co. vs. Herring-Hall-Marvin Safe Co., 135 O. G. 1804.

In Rieger vs. Beierl, 150 O. G. 826, where the oath forming part of the application papers was held invalid and without legal effect because executed before the attorney in the case, the proper procedure upon receiving such an application is indicated.

> Applications so executed will not be forwarded to the examiner but notice to file a proper oath will be given applicant and the application will not be given a date and serial number until the papers are so completed.

It may be stated that the difficulty may be avoided either by filing a new oath executed before another notary, or filing a new power of attorney to a person other than the notary before whom the oath was taken.

In case an application is received with a power of attorney to a person not registered under Rule 17 the procedure to be followed is stated under Order 2047 as follows:—

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In all applications for patent, in which the power of attorney is to a person who has not been registered under the provisions of Rule 17, the first office letter in the case will be sent to the attorney, who at the same time will be informed that until he has been registered, no further correspondence will be had with him, nor will any communication be received from him, in relation to the case.

This order will not apply in particular cases in which special recognition has been extended to unregistered attorneys.

Rule 18.

A power of attorney, to be acceptable, must satisfy the following requirements:

It must be—

a. written.

b. signed as a rule by the inventor or by the administrator or guardian of the inventor or by the joint inventors, if the invention be joint.

c. name each and every person to whom the power of attorney is given.

d. bear a canceled twenty-five cent war revenue stamp if dated on or after December 1, 1917. See Order 2361, reading as follows:

The revenue law of October 3, 1917, effective December 1, 1917, as to operations in the Patent Office, requires a documentary revenue stamp to the value of 25 cents to be affixed to each power of attorney (either original, associate, or substitute), and canceled. No power of attorney dated on or after December 1, 1917, will be recognized unless such revenue stamp has been so affixed and canceled. The application clerk has been provided with rubber stamps, and has been instructed as to the use of such rubber stamps in treating powers of attorney filed with applications for patent, and to which the necessary revenue stamps have not been affixed.

When the revenue stamp has not been affixed to the power of attorney, the examiner will in his first action call the attorney's attention to the requirement for the stamp and notify him that no amendment will be entered until the stamp has been affixed.

If an amendment is filed without supplying the revenue stamp, the clerk will not enter it but will call it to the examiner's attention who will immediately notify the attorney that it cannot be entered.

While the general rule is that joint inventors must each sign the power of attorney, certain exceptions have been made on grounds of equity:

Where one of two joint applicants subsequently files a sole application for the same improvement, a power of attorney executed by the other of the joint applicants and their assignee,

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the other joint applicant refusing to join therein, will be accepted by the office as sufficient.

The rule is familiar that where there are two men owning a patent and one of them desires to bring an equity suit for infringement in which the other will not join, the former may bring the suit, naming and making his co-owner a nominal defendant. The underlying principle of that equity practice warrants the approval of the power of attorney presented by Bailey and the assignee. (*Ex parte* Benjamin & Bailey, 59 O. G. 298.)

Where one of two joint inventors seeks to cause abandonment of their application by preventing amendment thereof, permission will be given the coinventor to prosecute the application throught an attorney of his own selection.

In this case the attorneys for the joint inventors could not amend because Barrett had all the papers and refused to allow them to give an associate power to the attorney of the other joint inventor's selection. *Ex parte* Barrett and Alter, 127 O. G. 847.

It seems to be well settled that one of two joint applicants cannot appoint an atorney without he concurrence of the co-applicant except upon a showing of inability to obtain such concurrence.

The co-applicant may afterward concur and render the power valid but such validity dates only from the concurrence and is not retroactive. *Ex parte* Deforest and Horton, 141 O. G. 566.

Where the entire invention has been assigned prior to the filing of the application the power of attorney should be signed by the assignee as well as by the inventor. *Ex parte* Ackerman 17 O. G. 1036.

Ex parte Hinkson, Hey & McConahy, 111 O. G. 2220. Hinkson and Hey assigned their rights to McConahy and another, who then asserted their rights and appointed an attorney of their own. Hinkson and Hey then asserted that McConahy was not a joint inventor, and filed a joint application and a power of attorney in the original joint application which McConahy would not sign. The two applications were placed in interference. The power of attorney by Hinkson and Hey was refused since it would permit the two applicants to conduct both sides of the interference to the exclusion of the third applicant.

The rule says:—

General powers given by a principal to an associate cannot be considered. In each application the written authorization must be filed.

In this respect Patent Office practice differs from general

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practice where one may give a general power of attorney to handle all his business affairs, whatever they may be. Each patent application file must contain the power of attorney which applies to itself and to no other. For instance—

> Where the power of attorney given by one of the executors is not signed in person but by one claiming to act as his general attorney, the power of attorney should not be recognized since the rule of the office which denies recognition to general powers of attorney is applicable. *Ex parte* Rogers, 125 O. G. 2766.

Rule 19.

Rule 19 is self explanatory but there may be mentioned in connection with it a certain old decision, *ex parte* Ranks, 38 O. G. 329, which held—

> An "associate attorney" cannot be nominated by an applicant without the consent of the regular (or principal) attorney. The regular course would be for such principal attorney to nominate his associates upon the written authorization of his client.

I happen to know that a petition from the application of this rule was taken to Commissioner Ewing and granted with the laconic indorsement "Whether principal or associate, it makes no difference." So far as published decisions go, *ex parte* Ranks still stands.

Rule 20.

The office of a patent attorney is not permanent or continuous, like that of an attorney in a court of law, but exists only by virtue of employment in particular cases.

As between the applicant and his attorney, a notification of discharge, when received at the Patent Office, terminates the right of the attorney to act for the applicant before the office and also the right of the office to correspond with him as attorney.

A reasonable notice of such discharge to the opposite party is an interference case terminates the right of such party to deal with the discharged attorney as the attorney of the applicant. Hoosier Drill Co. v. Ingels, 15 O. G. 1013.

The assignee of the entire interest in an invention has the right to intervene at any time, revoke all existing

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powers of attorney and either prosecute the application himself or appoint an attorney of his own selection, not only to the exclusion of the inventor but of his administrator, if the inventor be dead. *Ex parte* Wick, 117 O. G. 902.

Ex parte Hertford, 113 O. G. 851, construes the term entire interest as used in this rule as mean a legal and not an equitable interest. In this case the assignment was for the entire interest but lacked the request that the patent issue to the assignee (Rule 26) and the assignment was held to be for an equitable and not a legal interest. The assignee having filed a power of attorney, denominated by him an "associate power", it was held that it should be entered on the file as a power to inspect only and not as an associate power of attorney.

Where there are conflicting assignments of the entire interest, neither assignee will be recognized in appointing an attorney. (*Ex parte* McTammany, 93 O. G. 751.)

When an applicant alone makes a power of attorney he may revoke it and appoint anew to the exclusion of every one except the assignee of the whole interest, but when an applicant joins with the assignee of less than the whole interest, or with the grantee or licencee in making a power, it will require the coöperation of both to revoke it. *Ex parte* Anderson, 62 O. G. 449.

A power of attorney to prosecute an application for letters patent is irrevocable by the applicant without the consent of the attorney if it forms part of a contract entered into for a valuable consideration which creates a beneficial interest in the patent in favor of the attorney appointed by that power. (*In re* Harrison, 13 O. G. 547.)

An assignment of one-third interest to the attorney, existing at the time of filing the power, is such a contract and the power is irrevocable. (*In re* Edwards & Gregory, 110 O. G. 860.)

Neglect to pay the attorney's fees does not confer such a beneficial interest on the attorney and the power is revocable. (*Ex parte* Rosell, 197 O. G. 535).

A power of attorney coupled with a promise to pay to the attorney ten per cent. of all money received for the invention is an interest *in futuro,* an equitable and not a legal interest, and does not render the power of attorney

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irrevocable. (*Ex parte* Firsching, 80 O. G. 1272).

As a rule the death of the inventor revokes a power of attorney given by him and a new power signed by his administrator or executor should be required. In Eagleton Manufacturing Co. vs. West, Bradley & Carey Manufacturing Co., 27 O. G. 1237, the court said:

> The authority given the attorney is only to amend the application and ceases at the death of the inventor.
>
> The only invention to which the oath and application of Eagleton were referable was that of merely japanning steel furniture springs; the authority given to his attorney was only to amend that application and ended at his death. The amendments made after the inventor's death were not mere amplifications of what had been in the application before the patent was granted without any new oath by the administratrix.

The court held this patent invalid but there is an implication in the decision that if the attorney had not exceeded his powers by introducing new matter after the death of the inventor, but had confined his amendments after that event to the original disclosure, the patent might not have been held to be invalid.

This view was taken in a subsequent decision of the Supreme Court in DeLaVergne Refrigerating Machine Co. vs. Featherstone *et al*, 62 O. G. 741, in which it said:

> Where objection was made to the validity of a patent because of an amendment made by the attorneys after the applicant's death, no new power of attorney having been filed at the Patent Office and no administrator having intervened and filed a new oath, Held (1) the amendment was within the scope of the original specification and required no new oath; (2) it appearing that the attorneys had power in fact to act and that their acts were subsequently ratified by both adminstratrix and assignee, the amendment did not invalidate the patent.

The following excerpts from *In re* Mattulath, 179 O. G. 853, are of interest in this connection as indicating the position of the D. C. Court of Appeals on this question:

> The inventor died and the office, acting on information not part of the record, refused to accept an amendment filed by the attorneys, and a letter was addressed to them notifying them of the revocation of their power by the death of the inventor. The application in due time became abandoned by failure to prosecute. After a lapse of seven years Mattulath's widow filed a petition to revive which, after refusal by the Commissioner, was granted by the D. C. Court of Appeals. In discussing the case the Court said: "Notwithstanding this express revocation (by the Office) no attempt was made by the Office to notify the widow, which it is said by the Commissioner it was under

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no obligation to do even if aware of her name and address. Rule 20 is the only Office rule regarding notice in case of the revocation of a power of attorney and this the Commissioner held did not require notice to the applicant. The rule, construed literally, does not seem to require notice to the applicant's representatives but such construction is within its spirit." And further: "The delay in revieving the application would, in reasonable probability, not have occurred but for the strange action of the Office in acting upon some unexplained source of knowledge of the death of the applicant and holding that the death absolutely and at once revoked the power of attorney of his solicitors. The amendments proposed by them, presumably without knowledge of their client's death, were formal; they contained no amplification of the original application and required no additional oath. That the power to make such an amendment had not been revoked by death, and that action could have been taken upon it lawfully, had been declared by the Supreme Court in DeLaVergne Machine Co. vs. Featherstone, 62 O. G. 741. This decision ought to have been well known in the Office."

The notice of revocation from the Docket Clerk, referred to in Rule 20, applies only to principal attorneys. Notice of revocation is given to associate attorneys by the primary examiner under Order 2024, and does not require approval by the Commissioner.

Order No. 2024.

To Principal Examiners:

It is hereby directed that associate attorneys whose powers have been revoked shall be formally notified of such revocation. Such notice, addressed to the associate attorney, will take the form of the usual letter from the Examiner, on blank 2-260, and will be in the following language:

You are hereby informed that the associate power of attorney to .....in the above-entitled case was revoked on .....
by ..... principal attorney.

.....
Examiner, Div. 111.

Rule 21.

Requires no discussion.

Rule 22.

Although not mentioned in the rule the converse of paragraph (a) is equally important. If courtesy is required from applicants and attorneys, it is also due them. Those having business with the Patent Office should be given every courtesy and consideration possible and all official letters should be courteously worded, supply all necessary information clearly and fully, and be entirely

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free from any hint of personal feeling or controversy. The examiner represents the Government and his official actions should not belittle the dignity of the relationship.

The following decisions are quoted to illustrate paragraph (b):

> **Duryea & White v. Rice, 114 O. G. 761. A petition and brief filed in a case should not include irrelevant matter relating to the conduct of some officer of employe of the department. Charges against employes should be presented separately.**
>
> **Maynard, 137 O. G. 1940. The filing of petitions requesting that an application be transferred from one division to another, which are in the nature of complaints, condemned.**
>
> **Eggan, 172 O. G. 1091. The impropriety of filing a petition from the action of the examiner and at the same time filing a complaint against the examiner based upon the same state of facts is obvious and such a practice cannot be too severely condemned.**

(c) and (d)

The leading decisions upon these paragraphs are In re John Wedderburn and John Wedderburn Co., 81 O. G. 159, and U. S. ex rel. Wedderburn v. Bliss, Secretary of the Interior, 81 O. G. 1783. Under their construction the hearing is before the Commissioner of Patents whose decision does not go into effect until after it has been approved by the Secretary of the Interior. The hearing is not before the Secretary personally, nor it the decision appealable to him, the Commissioner acting in his administrative capacity only.

Rule 23.

The purpose and reasonableness of this rule are obvious. It only remains to call attention to the fact that the reference to possible powers of attorney given to Members of Congress is entirely superfluous, since we have seen, in discussion of Rule 17, that Members of Congress cannot be registered or act as attorneys in any patent cause pending before the office.

ASSISTANT EXAMINERS WANTED.

A number of vacancies exist in the grade of fourth assistant examiner, carrying the salary of $1,500, to which the attention of technically trained persons is earnestly invited.

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Permanent appointments will be secured by passing the required Civil Service Examination, information whereof may be had upon application to the Civil Service Commission, Washington, D. C.

Temporary appointment may be given persons exhibiting the required training in mathematics, chemistry, physics, mechanical drawing and French or German, pending their taking the Civil Service Examination and obtaining a rating therefrom.

Persons not subject to the draft for military service and having the necessary education are invited to write to the Commissioner of Patents relative to temporary appointments.

Promotion to the higher grades is reasonably rapid. The work commends itself to college and technical school graduates especially, is considered as interesting as any in the Government Service, and in many of its branches is held very important in the prosecution of the present war.

OF PERSONAL INTEREST.

Our New Chief Clerk.

On May 3, 1918, Law Examiner Melvin H. Coulston was appointed Chief Clerk. He joined the Examining Corps Feb. 17, 1902, and was promoted through the grades to first assistant examiner, which position he attained July 14, 1910. He was made law examiner Nov. 16, 1915, and given charge of the installation of interferences. For this work he was peculiarly equipped as he had seen service in several divisions of the office, including the Interference Division, and for over five years had been detailed to assist the board of examiners-in-chief. Mr. Coulston has the reputation around the office of being a "hustler"; he was manager of the very successful campaign for subscriptions to the second Liberty Loan; he is President of the Patent Office Society and the society takes no little pride in his selection for this important position.

Primary Examiner L. D. Underwood has been made

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law examiner, vice Mr. Coulston and succeeds to Mr. Coulston's work. Mr. Underwood has been primary examiner since July 1, 1909, coming up through the grades.

While assistant examiner he was acting Law Clerk from Oct. 12, 1905 to July 1, 1909; he is the compiler of the well known Underwood Digest and is reckoned as having an unusual knowledge of decisions.

Mr. Underwood having left Division 45 to assume the duties of law examiner, Mr. A. H. Giles, primary examiner in charge of Division 21, was transferred to preside over Division 45, a change in work concerning which Mr. Giles has expressed himself as abundantly pleased.

"Welcome the coming, speed the parting guest."

We extend greetings to the following additions to the Examining Corps appointed since July 1, 1918, to the grade of fourth assistant examiner.

Edw. C. Johnson of Col.
Preston M. Nash of Md.
Virgil C. Kline of Mo.
Miss Jessica Dee, of Mass.
Ernest F. Klinge of D. C.
Don Carloss Ryan of Ky.
Paul Kamper of Mich.
Albert L. Cooper of Penn.
Simon Saperstein of N. Y.
Wm. W. Seals of Texas.
Aubrey D. McFayden of N. C.
Simon Birnbaum of N. Y.
Wm. Katz of N. Y.
Miss Alberta V. Haden of D. C.
Robt. V. Moss of N. C.
Arthur A. Johnson, N. Y.
Miss Mary B. Davidson of Tenn.
Roswell A. Bryant of Md.
Alfred T. Hyde of Va.
Geo. E. Sartwell of D. C.
Miss Grace MacFarland of Cal.

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Within approximately the same time the Corps has sustained the following losses through resignations:

H. E. Stauffer, Examiner of Interferences.
Wm. F. Woolard Primary Examiner.
*B. T. Rauber, Second Assistant Examiner.
*H. F. Freeman " " "
*H. C. Berman " " "
*Chas. Silver " " "
*Edw. C. Taylor " " "
*Carl F. Kraft " " "
*C. H. Biesterfeld " " "
H. A. Whitehorn " " "
*A. M. Pedersen Third Assistant Examiner.
*Edw. A. Hampson " " "
F. E. Haskell " " "
*E. F. Dowell " " "
*Towson Price " " "
*M. J. Reynolds " " "
*G. R. Douglas " " "
*A. C. Nolte " " "
*H. H. Jacobs " " "
*W. S. Brown " " "
J. W. Morrison " " "
*L. A. Maxson " " "
*J. L. Fearing " " "
*Jos. A. Kurz " " "
*D. N. Halstead " " "
*John Flam " " "
*Sol Shappirio " " "
*Lee R. Grabill, Jr. " " "
*Jas. T. Erwin, Jr. Fourth Assistant Examiner.
*F. W. Dodson " " "
*Chas. F. Blakely " " "
John J. Darby, Jr. " " "
*Wm. L. Phillips " " "
*R. J. Gilcher " " "

* Entered Army or Navy service.

Mr. Henry E. Stauffer was appointed fourth assistant examiner Jan. 25, 1893, from Delaware. He was promoted through the several grades and made examiner of

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interferences May 6, 1910, which position he held till he resigned June 12, 1918. He served several years in each of Divisions 19, 30 and 37; he was for four years an assistant examiner in the Interference Division before his elevation to the head of this division.

He is now associated with the National Cash Register Company at Dayton, Ohio, in which new field we wish him success.

Mr. Wm. F. Woolard was appointed fourth assistant examiner on July 1, 1891, from Illinois. He, too, was promoted through the grades to primary examiner, which position he attained May 8, 1906, being placed at the head of Division 21. On July 1, 1907, he was appointed Chief Clerk and occupied this position until May 3, 1918, when he returned to Division 21 as primary examiner. As a member of the corps he was always connected with Division 21. He resigned July 10, 1918, to be associated with Erwin and Wheeler, Milwaukee, Wis., carrying with him the best wishes of an exceedingly large circle of friends and acquaintances.

The new head of Division 21, Mr. Wm. F. Thurber, was appointed to the corps Dec. 21, 1903, from Massachusetts he has served in all the grades as assistant examiner. With the exception of four and a half years in Division 38 he has been engaged in the Classification Division and has reclassified many classes throughout the office. He brings to Division 21 a practical knowledge of textile manufacturing gained before he came to the office by courses of study at the New Bedford, Massachusetts, Textile School and several years' work in textile mills in Massachusetts and Texas.

Mr. Charles S. Grindle made examiner of interferences, June 17, 1918, was transferred from Division 31 over which division he had charge since the death of Dr. Ely.

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Mr. Grindle was appointed as fourth assistant examiner November 5, 1903 and made primary examiner August 1, 1916, being then given charge of Division 14. For six years, as assistant examiner, he was in the Interference Division and thus is abundantly qualified to determine interference contests.

Mr. George A. Lovett took Mr. Grindle's place at the head of Division 31 on June 17, 1918, at which time he was promoted from first assistant to primary examiner. Mr. Lovett has been a member of the corps since April 1, 1905 and after serving something over three years in Division 12 was transferred to the Classification Division, where he remained till his recent promotion. Mr. Lovett has the degree of Ph. B. from Findlay College, and A. B. from Indiana University, where his major study was chemistry.

In noting changes in the personnel of the corps it seems not inappropriate to remark on the recent addition of ladies thereto. While for some years the corps was graced by a sole representative of the sex, there are now no less than nine therein. Concerning their work one primary examiner has recently remarked, "Send me some more if they are as good as those I have."

Captain Burns, formerly of Division 5, and Captain Zacharias, formerly of Division 34, recently registered at the headquarters of the American Universities in Paris giving their addresses as 60th Regt. Art., A. P. O. 702; we trust their many friends will fix up their address books accordingly.

Captain Hodgkins is another of the Patent Office examiners to get into the thick of it abroad, he having

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sailed for France in the middle of August. He is connected with the staff of the 35th Brigade Coast Artillery, A. E. F. and this address should be kept in mind by his numerous friends.

We note with regret the death of Ensign Delozier Davidson formerly a member of the corps. He was killed in France August 17 in consequence of an accident while flying in a seaplane. A graduate of Lehigh University he was appointed a fourth assistant examiner Dec. 21, 1915, and was assigned to Division 24. In August, 1917, he was promoted to the position of third assistant examiner and resigned soon afterwards to enter the aviation branch of the Navy. His father was for many years a member of the firm of Baldwin, Davidson and Wright of this city.

ROGERS on PATENTS

BY

WALTER F. ROGERS

OF THE WASHINGTON BAR

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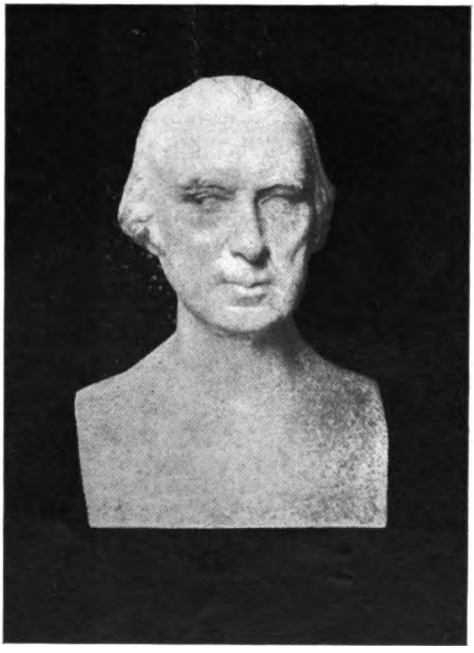
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JAMES MADISON, AGE 76

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Made in 1827. In possession of the Virginia Historical Society at Richmond.

Reproduced by Courtesy of the Author from the "Life of James Madison", by Gaillard Hunt, Esq.

(See "Legislative Beginnings of the Federal Patent System," page 51.)

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Journal

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VOL. I. OCTOBER, 1918. No. 2

EDITORIAL.

The modest advent of the Journal has elicited many kindly messages of commendation. The editorial board appreciates and acknowledges with thanks the friendly interest expressed by subscribers, and trusts that future pages will grow in interest and merit with each succeeding number. The Journal can fill the vacancy in periodical literature that was deemed to warrant its creation when all of its subscribers take a vital and active interest in its success.

Beginning with the article on Jefferson, the first administrator and interpreter of the American patent law,

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which appeared in the September number, short articles will be printed from time to time on men whose efforts have aided in the development and fixation of the patent law and practice.

The series of interpretative commentaries on the Rules of Practice begun in the September number will be continued from month to month, taking up each rule in numerical order until the series shall have been completed. The Rules constitute an inexhaustible source of ideas which can be tapped only lightly in this series. The commentaries were prepared primarily for the instruction of assistant examiners to aid them in their daily work; but they will, it is believed, be useful to all persons who have business before the Patent Office. They are, of course, authoritative only in so far as they are based on cited competent precedent. Doubtless many persons will differ with some of the deductions or interpretations to be found in them. It is hoped that disagreement will evoke discussion. By careful and thorough discussion, defects (if any exist) in the law, the prevailing interpretation of it, its administration, the modes of procedure, or the organization of the courts or Patent Office, will be uncovered and the way to improvement cleared.

The wise man of the parable digs deep and builds his house upon a rock. On what sort of a foundation does the manufacturer of a patented article erect his industry?

The builder for the patentee is the solicitor of patents. Upon the intelligence and care with which the solicitor draws his description and claims depends the stability and effectiveness of the patent. In an oft-quoted sentence no less an authority than the United States Supreme Court has recognized the high quality of skill required in the drafting of patent claims. The ideal patent solicitor should be artisan, engineer, scientist, lawyer, philosopher and prophet—nothing less. And yet, even officers of the executive departments have fallen into the error of classifying patent solicitors with claim

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agents, and with surprising frequency the inventor and investor choose to pinch on the foundation and spend in salvage.

In England, a patent agent is obliged to qualify to rigid standards. In the United States, the standards admitting to registration are more easily attained. A high standard of requirements to practice before the Patent Office would go far to eliminate the incalculable waste of wealth in litigation over imperfect patents. Soliciting of patents that are to form the basis of investment of capital in industry should command as careful attention as litigation in the courts and be appraised as of equal value.

The wise manufacturer will take care that the patents upon which he risks his capital are sound and of proper scope.

LEGISLATIVE BEGINNINGS OF THE FEDERAL PATENT SYSTEM.

By Wm. I. Wyman.

Of all the fathers of the Republic, the three most prominently identified with the sponsorship of legislation initiating the patent system are the three most readily associated with the constructive operations which led to the adoption of our Constitution and the beginning of our government. Madison is mainly responsible for the introduction into the Constitution of the provision which is the basis of patent protection, Washington urged upon Congress the importance of supporting it by appropriate legislation, and Hamilton supported the cause by argument and fact.

Madison has been called the "father of the Constitution". As was pronounced by one authority, "His influence largely shaped the form of the final draft of the Constitution". The parentage of the patent system may also be attributed to him, for not only was he active in the Constitutional convention in its behalf, but while he was a member of the Continental Congress he was a strong advocate of the idea.

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After the Committee of Detail of the Convention which was organized to draft a Constitution had reported, Madison submitted several propositions providing that Congress have the power "to secure to literary authors their copyright for a limited time" and "to encourage, by premiums and provisions, the advancement of useful knowledge and discoveries". On the same day, Charles Pinckney, of South Carolina, also submitted among others the proposals "to grant patents for useful inventions" and "to secure to authors exclusive rights for a certain time". All of these propositions were referred to the Committee, of which Madison (but not Charles Pinckney) was a member, and they reported and recommended that Congress have the power "to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries", which provision became incorporated in the Constitution, and constitutes the organic basis of the patent system.

Of this power, Madison wrote in the "Federalist" as follows:

> "The utility of this power will scarcely be questioned. The copyright of authors has been solemnly adjudged in Great Britain to be a right at common law. The right to useful inventions seems with equal reason to belong to the inventors. The public good fully coincides in both cases with the claims of individuals. The States cannot separately make effectual provision for either of the cases, and most of them have anticipated the decision of this point by laws passed at the instance of Congress."

Madison was always a serious student. Never was he mentally idle. He was intellectually alert to the utmost of his powers. Neither of prepossessing appearance nor of commanding presence, disdaining the arts of oratary and all meritricious aids to popularity, he gained his leadership among the most powerful leaders of his generation by sheer intellectual processes. Deep and broad knowledge of the problems of government, the result of severe and long continued study, coupled with a logical mind, sound judgment and persuasive powers of the highest order, were the elements of his mastery. Neither were his interests confined to questions of statecraft. He did not disdain to experiment in problems in "natural history", and he became absorbed whenever the occasion was opportune in mechanical contrivances and inventions. He knew James Rumsey and his experiments to

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devise a boat propelled by steam, and was acquainted with John Fitch's efforts to build his first steamboat, and lent sympathetic encouragement to both projects.

In conformity with his deep interest in applied science and legal means to promote industrial progress, he strongly presented while President, in a special message to Congress, the need of a separate Patent Office as an independent bureau, it being then a minor appendage of the State Department. He also urged other constructive legislation to strengthen and justify the system. Always, was he keen to initiate improvements and surround the system with proper safeguards.

This government is the result of compromise. The democratic idealisms of Jefferson blended with the strong, centralizing realisms of Hamilton to form a composite state which has become more democratic in basis and spirit than Jefferson ever dreamed of, and stronger in its centralization and more direct in its control than Hamilton ever had reason to hope for. Madison in a great measure embodied this compromising spirit, both in his close personal relations with these famous antagonists and in his absorption of such of their ideas as could be reconciled. With Hamilton, he was the controlling agency in giving unity to our government and endowing it with practical means to express its sovereignty, to exploit its common resources and to encourage and energize its national industries; while with Jefferson, he was the passionate exponent of democracy, advocating the enlargement of the people's powers and urging them to greater participation in the affairs of state.

The greatest of the constructive statesmen of that era, so rich in political ability, was the brilliant Hamilton. He was Madison's chief associate in the production of the Constitution, and with Madison, through the medium mainly of the "Federalist", was the almost indispensable agent in the adoption of our organic law. His natural tendency to strengthen the hands of the Federal government urged him to advocate laws encouraging invention as a national means to promote industry. In his famous "Report on Manufactures", while he was Secretary of the Treasury in Washington's first administration, he remarked "If the nation has genius for mechanical improvement, as is so often stated, encourage it". And again he asserted "The encouragement of new inven-

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tions and discoveries at home is among the most useful and exceptional acts which could govern a country". No other statesman of his time had a clearer vision or a more comprehensive view of fiscal and economic affairs or a greater aptness for practical government.

It follows that Washington, with his clear outlook and breadth of view, and with his readiness to listen to the counsels of Hamilton, would take similar action. After an abortive attempt to give life by legislative enactment to the constitutional provision in the first session of the first Congress, Washington, at the convening of the second session, was constrained to advise Congress that

> "The advancement of agriculture, commerce and manufacture, by all proper means, will not I trust, need recommendation; but I cannot forbear intimating to you the expediencey of giving effectual encouragement as well to the introduction of new and useful inventions from abroad as to the skill and genius in producing them at home * * * Nor am I less persuaded that you will agree with me in opinion that there is nothing which can better deserve your patronage than the promotion of science and literature."

This led to the enactment of the law of 1790, which created the United States patent system.

Although there was not wanting evidence that the basis of an industrial society was existent in exhibitions here and there of mechanical skill and inventive ingenuity, the prevailing industries at that time were the gathering of the products of the soil and the sea. It took prescience of a high order to foresee, even in a small measure, the mighty contributions of, and the changed order due to invention, and it is a noteworthy fact that the most weighty influences favorable to the introduction of legal protection of property in ideas were those statesmen who were most instrumental in launching the Constitution and most prolific in devising constructive measures to carry on the Government.

SOME FACTS FROM OUR OFFICE POSTER.

The subscription list now includes the names of most of the Patent Office Corps, of many attorneys and others interested in patent matters located in Washington and in the larger cities of the United States and Canada; and of a goodly number of foreign subscribers—in London, Liverpool, Glasgow, Paris. and also in Buenos Aires and Tokyo.

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PROPOSALS FOR SIMPLIFYING PATENT APPEALS.

By M. H. Coulston, Chief Clerk, U. S. Patent Office.

September 6, 1918.

The scheme of appeals under which an application for patent may now be prosecuted to an ultimate allowance or refusal, is briefly, as follows:

All appeals are taken in the first instance from rulings by primary examiners, law examiners, the examiner of trade-marks and designs and the examiner of interferences. These appeals always involve questions of form or questions of merit. Questions of form embrace all questions of office policy. Questions of merit embrace all questions involving the validity of patent grants.

Appeals from rulings on questions of form are provided by the Patent Office Rules of Practice and lie directly to the Commissioner. They are commonly called petitions to distinguish them from appeals proper. The propriety and necessity of vesting jurisdiction in the Commissioner to finally determine appeals or petitions involving questions of form has never been questioned.

Appeals from final rulings involving questions of merit lie in the first instance to the Board of Examiners-in-Chief. From their decision, in patent cases, and appeal lies to the Commissioner in person. From his decision an appeal lies to the Court of Appeals of the District of Columbia. This strictly speaking ends the line of appeals but an aggrieved party, who is an applicant for the grant of a patent, may, in effect, appeal still further. Section 4915 of the Revised Statutes provides that a party so situated may file a bill in equity and from the decision of the lower Federal Court having initial jurisdiction of that suit an appeal lies to an appropriate Federal Court of Appeals.

All appeals involving questions of merit are provided for by the statute except appeals lying from the adverse interlocutory decisions of the law examiner having jurisdiction of motions for dissolution or amendment of patent interferences. These last mentioned appeals are

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provided by the Patent Office Rules and lie, first to the Examiners-in-Chief and from them to the Commissioner in person, the Commissioner's decision being final in *inter partes* proceedings as to this class of cases.

From the foregoing it will be seen that every applicant for patent whose application has been finally refused by a primary examiner upon a ground involving a question of merits has at least five chances to get a reversal of that ruling by appealing to as many different higher tribunals. The same line of appeals is also open to a party to a patent interference who has received an adverse decision in an interference contest instituted to establish priority of invention as between himself and another.

Also, if registration is refused, a line of appeal lies open to an applicant for the registration of a trade-mark, print or label from the Examiner of Trade-Marks and Designs to the Commissioner in person. From an adverse decision by the latter on an application for registration of a trade-mark an appeal lies to the Court of Appeals of the District of Columbia.

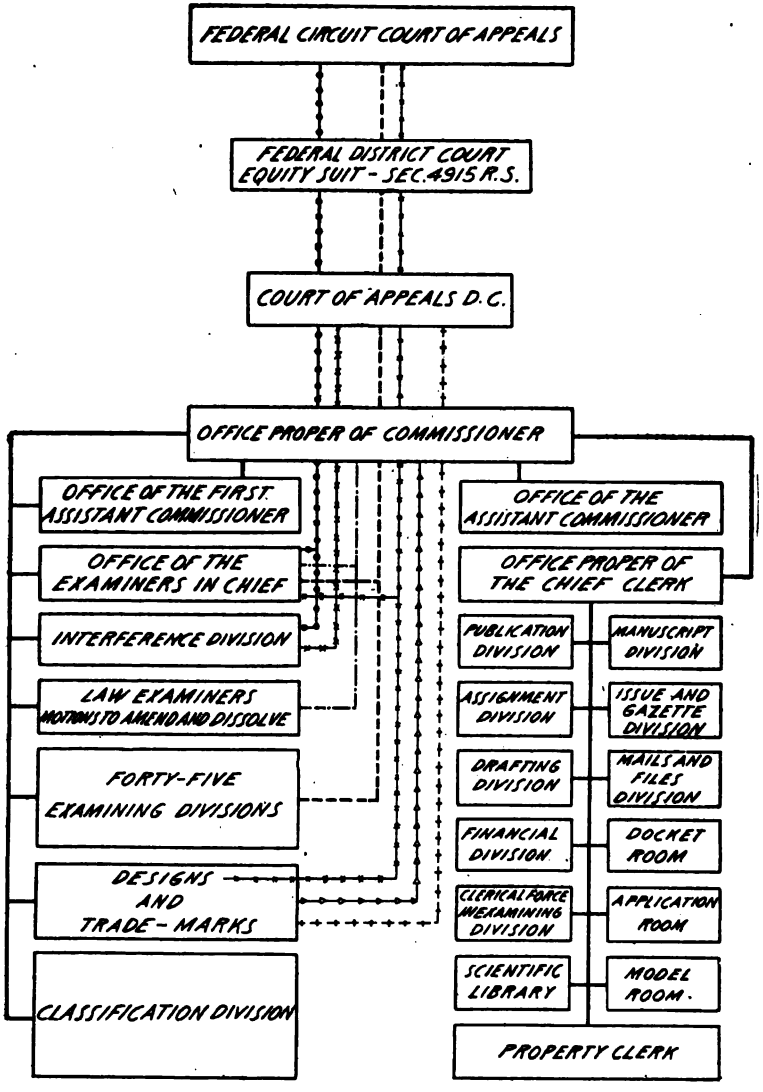
Also a line of appeal lies open to a party seeking or holding a trade-mark registration and who has received an adverse decision in an interference, opposition or cancellation proceeding. from the decision of the Examiner of Interferences to the Commissioner in person and from his decision to the Court of Appeals of the District of Columbia.

The accompanying chart is a graphic representation of the various lines of appeal mentiond.

It is quite possible for an applicant to run an entire line of appeals *ex parte,* and then be thrown into one or more interferences and run the same course of appeals over again one or more times. It is not often, to be sure, that an applicant has this experience but cases do arise that seem well nigh interminable. Multitudinous appeals are often the result of the inability of the Office to raise all appealable questions at one time, and sometimes the result of the tactical strategy of counsel.

As an illustration of the course of appeals which may be run I desire to refer to the history of an application quite recently on my desk. This application was origin-

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LINES OF APPEAL

ADMINISTRATIVE CONTROL
EX PARTE TRADE-MARK APPLICATIONS
EX PARTE DESIGN PATENT APPLICATIONS
OTHER EX PARTE PATENT APPLICATIONS
EX PARTE PRINTS AND LABELS
PATENT AND DESIGN INTERFERENCES
INTERFERENCE MOTIONS.
TRADE-MARK INTERFERENCES, CANCELLATION AND OPPOSITION PROCEEDINGS

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ally filed July 16, 1904. It was three times rejected and as often amended, whereupon it was placed in interference. This interference was dissolved by the Primary Examiner, who then had the jurisdiction of the questions to dissolve now vested in a law examiner. No appeal was taken. The application was thereafter again rejected three times and amended and then finally rejected, *ex parte,* whereupon followed an appeal to the Board of Examiners-in-Chief, resulting in an allowance of the rejected claims. A second interference, with the same opponent as the first, was then declared. This interference was decided in favor of this applicant by each af the appellate tribunals of the Office and the Court of Appeals of the District of Columbia. The losing party thereupon filed a bill in equity under Section 4915 of the Revised Statutes, and unsuccessfully prosecuted an appeal to the Circuit Court of Appeals. The applicant to whom I refer was made a party defendant in that suit. The application of the party to which I have referred was then involved for several years in a third interference which was twice before the Court of Appeal and on a third round of appeals was dissolved by the Commissioner on the ground that the issue was unpatentable. This decision threw open to the parties a line of appeals *ex parte* which was not availed of by any of them.

A fourth interference had in the meantime been declared between this applicant and another party. This last mentioned party moved to dissolve the interference on the ground that the claim in contest was not patentable over the very same reference upon which the application had been originally rejected. In support of his motion the moving party made tests of the reference, patented construction in the presence of both parties and the Primary Examiner. The Primary Examiner granted the motion and dissolved the interference. This ruling was affirmed by the Examiners-in-Chief and the Commissioner in turn. Thereupon the applicant returned to the Primary Examiner, made a slight amendment to his claim, and was again finally rejected. He then prosecuted *ex parte* appeals to the Board, the Commissioner, the Court of Appeals, filed a bill in equity under Section 4915, and is now on appeal to one of the Circuit Courts

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of Appeals. Had this application been promptly granted when filed the patent would have expired in 1921. As it stands today the question of patentability raised in the first action is still to be determined.

The excessive expense, delay and labor growing out of cases such as I have instanced above long ago gave rise to the suggestion that the number of appeals should be reduced. The records of the Patent Office show that at one time or another recommendations have been made for the abolition of almost every appeal now available. It is my present purpose to call attention to some of these proposals and with the reader's indulgence to express a personal opinion as to certain of them.

As Regards the Examiner of Interferences.

In his Annual Report for the year 1892 Commissioner Simonds recommended that all interference work should be transferred from the Patent Office to the Courts. Commisssioner Duell substantially repeated this recommendation in his Annual Report for the year 1898. He had a bill (H.R. Bill No. 7083) introduced in Congress to give effect to that recommendation.

Commissioners Simonds and Duell based their recommendations on the ground that the Office has not the requisite machinery to conduct interference trials effectively. I think that proposition refuted by the fact that the Office has managed to do so fairly well since 1836. Their proposal in this regard I believe to be wholly impracticable because it is necessary constantly to alter the status of interference proceedings after they are instituted. New parties must be frequently added and it is imperative that the examiners have ready access to the files and records of applications involved in interferences in order to determine whether these applications should be included in new interferences about to be declared. To attempt to transfer cases from the Office to the Courts and back again; to obtain the consent of the Courts to such suspensions ,and jurisdictional control as would be necessary to efficient prosecution of all pending applications would be not only impractical but, I think, well nigh impossible. The delays we now suffer would be multiplied and the chances for error and confusion greatly increased.

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In his Annual Report for the year 1893, Commissioner Seymour recommended that the Examiner of Interferences should merely be given authority to superintend preparation of the record and prepare a brief summary thereof to be transmitted therewith to the Board of Examiners-in-Chief for the first decision.

Mr. Otto R. Barnett, of the Chicago Patent Bar, in a letter written to the Paten Law Association of Washington, D. C., April 23, 1910, recommended that final hearings before the Examiner of Interferences should be abolished and interferences heard on the merits in the first instance either by the Board or by an independent tribunal constituted for that purpose.

I do not think that the proposal to eliminate the jurisdiction of the Examiner of Interference to initially decide questions of priority should be adopted. His decisions have always been considered valuable and they, and the briefs written ithe light thereof, serve well to separate what is material from what is immaterial and to sharply display to appellate tribunals the really important points to be decided.

As Regards the Examiners-in-Chief.

In his Annual Report for the year 1899 Commissioner Duell again recommended the elimination of an appeal in the Patent Office. This time he proposed to abolish the Board of Examiners-in-Chief and to appoint sufficient Assistant Commissioners to form, with the Commissioner, a tribunal which should hear and decide all appeals. This proposal deserves special consideration for it was later taken up and vigorously pushed by Commissioner Moore, who recommended its adoption in each of his Annual Reports from 1907 to 1911.

Commissioner Moore repeatedly had bills introduced at different sessions of Congress to carry this proposal into effect. Among these bills he mentions in his 1908 Report, H.R. Bill No. 15,838 and S. Bill No. 3,970; in his 1909 Report, H.R. Bill No. 18,855 and S. Bill No. 5,636; and in his 1911 Report, H.R. Bill No. 7,609. One of these bills, S. Bill No. 3,970, passed the Senate in the 60th Congress, but no action was taken in the House. Extensive hearings were had by the Patents Committee of the

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House upon H.R. Bill No. 18,885, and this bill was favorably reported (Report #810, 61st Congress, 2nd Session). This measure had the endorsement of such patent lawyers as Mr. Barnett, of Chicago, Henry D. Williams, Greely & Austin, Knight Brothers, Howson & Howson, of New York, and others, including the then Secretary of the Interior and President Taft. It was, however, bitterly opposed by the Board of Managers of the Patent Law Association of Washington, D. C., in the name of that large organization. This opposition was based on the ground that the bill proposed an unstable Board of Appeals, whose membership would be subject to change with each change of administration and that the decisions of such a body would not be stable or uniform. Also it was opposed on the ground that to make the Commissioner a member of the sole appellate tribunal of the Office would deprive that tribunal of the independence which the present Board of Appeals enjoys and which its founders intended it to have. In this connection it is interesting to recal that the forerunner of the present Board of Appeals, which was itself created by the Patent Act of 1861, was a Board of three persons, provided by the Patent Act of 1836, appointed by the Secretary of State and clothed with jurisdiction to decide appeals from decisions of the Commissioner of Patents, —quite a different proposition from having its decisions reviewed by him as are the decisions of the present Board.

While the debate was on upon H.R. Bill No. 18,885 I shared the opinion of others in the Office, that the position of the Washington Patent Law Association was not well founded, and that its objections were frivolous and visionary. A later experience of five years as an Assistant to the Board of Appeals, where I had an opportunity to observe the tension that may develop when opinions of coordinate judges sharply clash, and a subsequent association of over two years with the Commissioner's Office, where I have learned that Commissioners are subject to substantially the same frailties as other men, leads me to a change of view. I do not believe that it would be wise to deprive the Commissioner, as the head of the Office, of the power of removing any subor-

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dinate official, a power, which, as a practical matter now resides absolutely in his hands; but neither do I believe it would be wise to make him a member of a judicial tribunal and leave him vested with that power over his associates and that tribunal. Before such a power, however discreet its possessor, there would inevitably be a tendency toward a suppression of views and a coloring of judgments on the part of his associates which ought not to exist or be tolerated. I have never heard of a court established to administer any branch of our law whereof the chief justice had power to remove from office the other members of that court.

As Regards the Commissioner.

The Patent Law Association of Washington offered a counter proposal to that of Commissioners Duell and Moore, whereby the present appeal to the Commissioner from the Board in *ex parte* cases should remain unchanged but the corresponding appeal to the Commissioner in interference cases should be eliminated. It proposed that the appeal from the Board in interference cases should lie direct to the Court of Appeals of the District of Columbia. It wrote a brief in defence of its position. It also gave its support to H.R. Bill No. 23,916, introduced for the purpose of giving effect to its recommendations. I think that the proposal thus made to eliminate the interference appeal to the Commissioner was practical and might have been adopted without adversely affecting the Commissioner's prestige or his powers to shape and control the policy of the Patent Office. If it had been adopted he would have had much more time to attend to the executive side of his duties, and, in my opinion, much more of his time could be profitably spent in that direction.

Mr. Barnett gave it as his judgment that the *best* plan would be to abolish all appeals now lying from the Board of Appeals to the Commissioner. He said: "this plan is simpler, more logical, and in my judgment better because it not only improves the present law by eliminating one appeal but it provides that all such appeals in the Patent Office, not relating to executive matters, shall be taken to what is virtually a permanent tribunal."

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Mr. Jusice J. A. Van Orsdal, of the Court of Appeals of the District of Columbia, has recently expressed the same view. His idea appears to be that there shall be no appeal from the Board to the Commissioner but that the Commissioner should retain his present supervisory power to refuse a patent which the Board may have decided to allow. This the Commissioner might do, for example, by refusing to sign a patent in which event the applicant could be allowed an appeal to a court.

This plan of eliminating all appeals from the Examiners-in-Chief to the Commissioner of patents was also recommended by the President's Economy and Efficiency Commission in its report of its investigation of the Patent Office.

I have never heard of a Commissioner of Patents who was willing to surrender the appeal now provided by law to him from the Board in *ex parte* cases. The reason is not far to seek. To take away this appeal would greatly detract from the dignity of the Office of the Commissioner and it would take from the Commissioner his most powerful agency whereby to impress upon the Office his policies and standards. I doubt the wisdom of taking from him this appeal notwithstanding that from time to time policies may be enforced through it which are not wise and not right. Everybody knows that ultimate truth is generally discovered as the result of many trials and experiments and that when it is found it is almost certain to prevail thereafter upon its own merits. I believe that, in the long run, great good grows out of the varying views expressed in the decisions of different Commissioners in *ex parte* cases.

As Regards the Courts.

Commissioner Duell in his Annual Report of 1899 proposed the elimination of the Court of Appeals of the District of Columbia. He said:

> The reason why there should be no appeal to the court is that under Section 4915 of the Revised Statutes the applicant to whom a patent is refused can prosecute his application in another court and an aggrieved party in an interference proceeding can renew his contest in another court.

On the other hand, Mr. Barnett proposed to eliminate the equity suit under Section 4915 of the Revised Statutes,

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which in effect is an appeal. He gave no other reason for this than the simplification of procedure and the saving of expense.

I am of the opinion that each of these courts offers advantages under certain circumstances to a party who desires to appeal from a final adverse decision of the Patent Office. If he desires a speedy determination of the merits of his case upon the exact record upon which it has been adjudged in the Patent Office, he can find it in the Court of Appeals of the District of Columbia; if he wishes to correct or amplify his record before making his last appeal to obtain a patent he may resort to the equity suit provided by Section 4915 of the Revised Statutes. It is possible, perhaps probable, that the advantages thus indicated justify retention of both lines of procedure, but the same appellant should not, I think, be permitted to pursue both lines upon the same question. Rather he should be required to elect which course he will pursue when he leaves the Patent Office and the decision he receives in the course elected should be final. A precedent for this proposal of alternative remedies open to an appellant from a final decision of the Patent Office is found in Section 11 of the Patent Act of 1839, which provided for an alternative appeal from a decision of the Commissioner of Patents, either to the Board of three Examiners provided by Section 7 of the Patent Act of 1836, or to the Chief Justice of the District Court of the United States for the District of Columbia.

As Regards the Law Examiner.

No one in authority seems as yet to have suggested the elimination of the appeals from decisions of the Law Examiner denying motions to amend interferences and granting motions to dissolve interferences. The line of appeals which now lies from his decisions to the Board and the Commissioner terminates with the Commissioner. The Court of Appeals of the District of Columbia refuses to take appeals from the Commissioner in these cases on the ground that it has jurisdiction only of appeals from final decisions of the Patent Office either refusing a patent or deciding priority of invention, and that these motion cases bring up merely decisions on in-

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terlocutory questions. The result is that when the Commissioner affirms a decision of the Law Examiner the aggrieved party can obtain relief through a court only by proceeding *ex parte,* beginning over again with the Primary Examiner. It seems to me that an adverse decision of the Law Examiner should be sufficient to at once throw a party at this stage of an interference upon his *ex parte* remedy. This would eliminate two appeals and the expense, labor and delay incident thereto. It is, moreover, a change which could be made by merely amending the rules as these appeals are not statutory.

This paper should not leave an impression that the demand for a reduction in the number of appeals is unanimous. That is not the case, although, doubtless, a majority of persons interested prefer it. There is, in the Commissioner's files, a long letter from a well known member of the Patent Bar, forcibly defending the present arrangement. It is my understanding that the Patent Law Association of Washington has advanced its own suggestions for change only "if a change is to be made," and apparently that organization has displayed no particular interest in its own proposal except as a means of backfire for defeating the proposals of others.

The frequently mentioned subject of establishing a Circuit Court of Appeals to pass finally upon all appeals in patent suits is one lying substantially outside the province of Patent Office procedure. I pass it with a mere mention as being a more suitable topic for discussion by those who had experiences in the courts.

The three proposals of changes in patent appeals which I deem most practicable are:

(1) The elimination of all *inter partes* appeals from decisions of the Law Examiner denying motions to amend and granting motions to dissolve interferences.

(2) The elimination of appeals to the Commissioner of Patents from decisions of the Board of Examiners-in-Chief in patent interference cases.

(3) The elimination of successive and substitution of alternative appeals from final decisions of the Patent Office to the Court of Appeals of the District of Columbia and the Federal Courts having jurisdiction of equity suits under Section 4915 R. S.

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AMENDED RULE 17.

It may safely be assumed that no change in the Rules of Practice has excited more interest among Patent Attorneys than the recent one adding a section to Rule 17, by Order No. 2417, published in the Official Gazette, Vol. 252, p. 967. This section reads—

> "(h) Every attorney registered to practice before the United State Patent Office shall submit to the Commissioner of Patents for approval copies of all proposed advertising matter, circulars, letters, cards, etc., intended to solicit patent business, and if it be not disapproved by him and the attorney so notified within ten days after submission, it may be considered approved.
>
> Any registered attorney sending out or using any such matter, a copy of which has not been submitted to the Commissioner of Patents in accordance with this rule, or which has been disapproved by the Commissioner of Patents, shall be subject to suspension or disbarment."

The position of the Commissioner relative to the advertising matter used by registered attorneys is set forth as follows:

Advertising matter of attorneys registered to practice before the Patent Office must comply with the following rules:

(1) Advertising matter may contain clear, correct, and explicit statements of the law, instructions relating to obtaining patents or registrations of trademarks, the name and address of the attorney, and the information that he prosecutes applications for patents and trade-marks.

(2) It shall be regarded as gross misconduct to advise applying for foreign patents under circumstances clearly indicating the purpose to secure fees from a client without consideration of his best interests, or without fully advising him of the incidents of foreign patents such as recurrent taxes, working, etc., and of the advantage of awaiting a favorable determination of the prosecution of an application for the invention in the United States Patent Office unless business reasons of the client require a different course; to stimulate the uninformed to apply for patents by enumerating a list of supposed inventions demanded by the public, or by citing instances of great profits made by in-

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ventors, to offer services for nothing for the purpose of securing a client; to induce, by advertising, the filing of applications for patents by offering to publish the patent without specifying the medium of publication or to sell the same without reservation, when obtained, or in any way to create a false or misleading impression in the mind of the reader.

Attention is further directed to the following extract from the 27th Canon of Ethics of the American Bar Association:

> The most worthy and effective advertisement possible, even for a young lawyer, and especially with his brother lawyers, is the establishment of a well-merited reputation for professional capacity and fidelity to trust. This cannot be forced, but must be the outcome of character and conduct. The publication or circulation of ordinary simple business cards, being a matter of personal taste or local custom, and sometimes of convenience, is not *per se* improper. But solicitation of business by circulars or advertisements, or by personal communications or interviews, not warranted by personal relations, is unprofessional.

It is interesting to note that communications received so far on the subject indicate an almost unanimous approval among attorneys of this effort to elevate the standing of the profession. Many express wonder that the effort was not made by a similar order long ago. If the plan accomplishes the result aimed at, one crying need for reform in our Patent System will have been met.

G. P. TUCKER.

EX PARTE THOMAS AND RULE 75.

By J. D. Cox, asst. examiner.

In view of the interest taken in the recent decision in Ex parte Thomas 251 O. G. 839, and the discussion thereif indulged in by examiners and attorneys, the writer ventures to set down some conclusions he has reached concerning the application of the same in specific cases.

In a carefully prepared decision, exhaustively reviewing the authorities, the Commissioner held that a copending patent will not sustain the defense of anticipation but will, under certain circumstances, sustain the defense of priority. It is one of the purposes of this paper to

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consider those circumstances under which a copending patent may be cited.

While in the opinions of some, the practice under Rule 75 is changed with respect to the citation of copending patents, the new practice necessitates no change in the wording of the rule. The rule states:

> "When an original or reissue application is rejected on reference to an expired or unexpired domestic patent which substantially shows or describes but does not claim the rejected invention," etc.

The framers of the rule were not so much concerned about when to cite the reference as they were about what the applicant must do to overcome one, "when" it is cited. Prior to this decision the rule had its limitations. A copending patent with a later filing date, for instance, was not cited against an application, even though it substantially showed or described, but did not claim the invention claimed by the applicant. This decision merely places a further limitation on its application.

Under this decision, a copending patent which shows or describes, but has no claim to the invention claimed by the applicant, can be cited only under the fourth defense of the statute. It, therefore, raises, the question of priority of invention. But priority is concerned with which one of two or more independent inventors was the first to make a certain invention. If the inventions are not the same, although not patentably different, the question of priority does not arise. The inventions must be identical. What then is the test for identity of invention? The Commissioner gives us the test when he states:

> "I look upon the existing practice in declaring interferences as a convenient standard for comparison" (Page 849).

In other words, if the patent were an application and if it contained claims to that matter, would an interference be declared?

Now, it is to be noted that this interference test is solely as to identity of invention. It is not a test as to whether the copending patent should be cited or not. The matter shown or described but not claimed in the copending patent might be identical with the matter claimed in the application but not germane to the matter actually claimed in the patent. The patent, for intsance, might claim the one specific form of a device and disclose but not claim a different specific form. While an inter-

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ference might be declared were the patent an application claiming both forms (ex parte Burk 184-288) yet it may not be cited as a reference because the matter not claimed in the patent is not germane to the matter actually claimed in it.

Since the citation of a copending patent raises an issue of priority it follows that there must be a party other than the applicant concerned. The other party is the public. But how came the public by the right? In the language of the decision:

> "If the prior inventor does not claim the invention, the public succeeds to his right at the date of the patent, but not until then" (Page 848).

But how far does this right extend? The answer is found in the decision:

> "Subject-matter disclosed but not claimed * * * the public is entitled to it by virtue of the patentee's abandonment" (Page 849).

Since the citation of a copending patent as a reference depends on the rights of the public and the rights of the public rest on the abandonment to it of the rights of the inventor, let us now consider what matter shown or described but not claimed in a copending patent is presumed to be dedicated to the public when the patent issues.

The following classification of matter shown or described but not claimed in a patent is a slight modification of that found in ex parte Mullen & Mullen 50 O. G. 837:

1st. Where the matter is indivisible from that claimed.

2nd. Sub-combination divisible from the matter claimed but claimable in the same case with it.

3rd. Sub-combination divisible from the matter claimed and not claimable in the same case with it.

4th. Different species.

5th. Indepent inventions.

Class 1. In this class, the matter not claimed being indivisible from the matter claimed, the applicant can get that matter only by reissue if he can get it at all. It is presumed that since the applicant cannot obtain another valid patent for the matter not claimed that he has dedicated it to the public.

This persumption would, however, appear to be rebutted when the applicant files a reissue for that matter, provided he is entitled to claim it in the reissue.

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Copending patents in this class, then, may be cited as references under Rule 75 unless the applicant is entitled to a reissue to include that matter, and has actually filed an application for such a reissue. In case he has filed such application, an interference, at the discretion of the Law Examiner, might be declared. In case the patentee is not entitled to that matter in a reissue the presumption of abandonment becomes conclusive and the copending patent may be cited as a reference.

This class corresponds to class 1 of Mullen & Mullen.

Class 2. In this class of cases the matter might have been claimed in the same case. Division could not have been required but the applicant could have divided if he so desired, provided he had filed his later application during the pendency of the former. It usually lacks the third of the following essential tests for a requirement for division:

(a) It must be structurally separable.
(b) Useful in other relations.
(c) Recognized as having a distinct standing in the arts.

The presumption appears to be that an applicant will obtain in a single patent just as much as he lawfully can, the patent office permitting. Since he did not claim the matter, it is presumed to be dedicated to the public. This presumption, however, is rebutted if he has a divisional application claiming the matter, or if he made a reservation in the patent. But since reservations are no longer permitted by this office, he is presumed to dedicate the matter not claimed to the public if he did not file a divisional application for that matter.

This presumption would also appear to be rebutted if the applicant is entitled to a reissue including this matter and has actually filed the reissue.

In this classe of cases, then, it would appear that where the applicant has no copending or reissue application claiming the matter, the patent could be cited as a reference. If, however, the patentee has a divisional application claiming it, there is no presumption of dedication to the public and the patent should not be cited, nor should it be cited if the patentee is legally asserting claims to this matter in a reissue application. In the above cases of divisional and reissue application, an interference, at the discretion of the Law Examiner, might be declared.

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This class corresponds to class 2 of Mullen & Mullen.

Class 3. This is a class of cases that meets all three of the tests noted above for a requirement for division. The office would not permit the matter to be claimed in the same case with the matter claimed. There is no presumption of dedication to the public. The patent should, therefore, not be cited.

If, however, at the end of two years after the issuance of the patent, the applicant has not filed an application for that matter, it becomes abandoned to the public. On the theory that the public succeeds to the abandoned right of the patentee, it would appear that after two years such a copending patent could be cited.

It could be argued, however, that since the inventor is barred by the statute from obtaining a patent after two years, the public, which succeeds to his rights, is also barred. The terms of the statute, however, merely bars the inventor from obtaining a patent but does not bar him from asserting his right to priority. If at the end of two years he has not asserted this right, he would, it appears, be precumed to have dedicated it to the public.

This class corresponds to class 3 of Mullen & Mullen.

Class 4. Since only one species may be allowed in a single case there is obviously no presumption of dedication in this class of cases. Such a copending patent should therefore not be cited unless, as pointed out in discussing class 3, it is cited after two years.

This is practically the same as class 5, below.

Class 5. Since two or more independent inventions may not be claimed in one application, the remarks under class 4 apply to this class, also.

In short, assuming that there is identity of invention, a copending patent under class 1 should be cited, except where the patentee is legally claiming the matter in a reissue. In this event, an interference, at the discretion of the Law Examiner, might be declared.

Copending patents under class 2 should also be cited where there is no divisional application claiming the matter, and no reissue application legally claiming it.

Copendng patents in classes 3, 4 and 5 should not be cited, at least, until after two years.

What, then, is the test as to when to cite a copending patent? The Commissioner gives us the test:

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> "I consider that an application should be rejected on a copending patent, under Rule 75, if an interference in fact, based upon the claims in the application and the subject-matter disclosed in the patent which is germane to the invention claimed therein, the counts of which might be broader than or otherwise different from the claims in the application, provided they did not omit a 'material and substantial' feature of those claims, would exist if both cases were applications, irrespective of the claims in the patent." (Page 849)

According to this test there must be,

> 1st. Identity of inventions.
> 2nd. The matter not claimed in the copending patent must be germane to the matter claimed in it.

As pointed out in the decision, the interference test is a convenient test for identity of inventions.

But when is the matter not claimed in a patent germane to that claimed therein?

> "He might have claimed any patentably novel subject-matter clearly disclosed in the application upon which his patent was granted which is germane to what he did claim:
> That subject-matter is germane which is included in the tangible subject-matter upon which the claims are founded. Such germane subject-matter belongs to the public whether patentably novel or not." (Page 849)

From this it appears that matter not claimed but which could have been claimed in a patent is germane to that claimed therein, because this is the only matter that "belongs to the public whether patentably novel or not."

The "tangible subject-matter upon which the claims are founded" is evidently the structure actually claimed plus the structure that falls in classes 1 and 2, because this would constitute a structure, which from the office point of view, is an indivisible whole.

It would appear, therefore, that the test of abandonment as discussed under classes 1 and 2 would be a convenient test as to whether or not matter not claimed in a patent is germane to matter actually claimed therein.

Since matter claimed in sub-combinations may fall in classes 2 or 3 depending on the state of the art, it follows that the development of the art also affects the question of when matter not claimed in a patent is germane to matter claimed therein.

Before citing a copending patent as a reference, the first thing to decide is whether the matter not claimed in the patent is identical with that claimed by the applicant. In other words, apply the interference test. If

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the inventions are not identical, there is no necessity of going further. If, however, the inventions are the same, then it is necessary to see whether the matter is germane or not. The abandonment test under classes 1 and 2 is thought to be a practical test for this feature.

The general rule is that the matter must be germane. And since it was not necessary to a decision in this case to pass on whether the matter not claimed was germane to that claimed or not, it is thought that the Commissioner intended to state only the general rule. The exceptions and cases not thought to come within this rule, are believed to be noted under the classes stated above.

Summary.

A copending patent which shows or describes but does not claim certain matter should not be cited against an application claiming it unless the following facts appear:

1. The copending patent must have an earlier filing date.
2. The inventions must be identical.
3. The matter must be abandoned or presumed to be abandoned to the public, as noted in classes 1 to 5 above.

It remains to be seen what effect this decision will have on the present interference practice. In interference decisions the judgment is one of priority and does not concern anticipation.

Suppose A has two claims to two diferent inventions but they are not patentably different. He loses an interference to B on claim 2. B cannot make claim 1. Under this decision, should claim 1 be rejected, and if so on what ground? No satisfactory solution has been found.

A rejection could hardly be based on the ground of res adjudicata, because neither the counts nor the parties are the same, the parties interested in an ex parte proceeding being the public and the applicant.

Claim 1 could be rejected on claim 2, even combining it with the prior art, under ex parte Whitelaw 219 O. G. 1237. But when class 2 is canceled, which it necessarily must be, there is nothing left but the interference issue upon which to reject the claim, and under the reasoning in this case this cannot be done, because the inventions covered by the issue and claim 1 are not identical.

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RULE 24.

By Chas. S. Grindle, Examiner of Interferences.

(Delivered before the fourth assistant examiners.)

24. A petant may be obtained by any person who has invented or discovered any new and useful art, machine, manufactare, or composition of matter, or any new and useful improvement thereof, not known or used by others in this country before his invention or discovery thereof, and not patented or described in any printed publication in this or any foreign country before his invention or discovery thereof, or more than two years prior to his application, and not patented in a country foreign to the United States on an application filed by him or his legal representatives or assigns more than twelve months before his application, and not in public use or on sale in the United States for more than two years prior to his application, unless the same is proved to have been abandoned, upon payment of the fees required by law and other due proceedings had. (For designs, see Rule 79.)

This rule covers a very extensive field. It includes most of the provisions of secs. 4886 and 4887 of the Revised Statutes, which form the basis of the major portion of the substantive law of patents. Obviously, in a paper of this character, it will not be possible to discuss at length all the various phases of the rule. A former paper of this series has considered in detail the characteristics and objects of a patent, and hence no attempt will be made to touch upon such questions; and as other provisions of the rule, such as that relating to persons entitled to prosecute and obtain a patent, to the effect in this country of the grant of a patent to the inventor in a foreign country and to the question of "fees" and "other proceedings", fall more properly within the scope of other rules, such provisions will be omitted from present consideration.

The portions of the rule which it is proposed to briefly consider are the expressions "art", "machine", "manufacture", "composition of matter" and "any new and useful improvement thereof", the terms "invented or discovered", "new and useful" and the various provisions defining the condition which must exist before a valid patent can be obtained.

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FIELD OF PATENTABLE INVENTION.

This field is defined by the terms "art", "machine", "manufacture", "composition of matter" and "any new and useful improvement thereof".

Inventions and discoveries falling within this field may be made the subject matter of patents; those outside of it cannot. It is well to recall that, while the filed of patentable invention is an extensive one, it embraces only a small part of the vast variety of objects to which human thought and intellect are directed. In discussing this point Robinson in his Law of Patents makes the following observation:

> * * * the field of patentable invention is comparatively narrow. By far the greater and most useful portion of human discoveries lie outside the domain of these exclusive privileges. The general phenomena and laws of matter, the methods of agriculture and commerce, the metaphysical and moral truths and all other inventions which do not relate to the industrial arts, belong at once, upon their publication, to all mankind.
>
> Robinson, vol. 1, sec. 27.

Inventions are frequently denied patentability, both by the office and the courts, on the ground that they fall outside of the field of patent protection. Such holdings have been made in regard to a system for code messages (Berdardini v. Tocci, 200 Fed. 1022) to an arrangement for a room in a house, (American Disappearing Bed Co. v. Arnaelsteen, 182 Fed. 324), and to various methods or arrangements for doing business, (In re Tallmadge, 174 O. G. 1219; In re Moeser, 1906, C. D. 685; ex parte Abraham, 1869 C. D. 59). And, as pointed out in some detail hereafter, a mere physical law or scientific principle cannot, even by its discoverer, be exclusively appropriated through the medium of a patent (Morton v. N. Y. Eye Infirmary, 2-Fisher's Patent Cases 320; American Bell Telephone v. Dolbear, 16-Fed. 448, 23 O. G. 535; McComb v. Brodie, 2-O. G. 117, O'Reilly v. Morse, 15 How. 112).

Terms Defining Field of Patentable Invention.

The scope and meaning of these terms have been discussed in numerous decisions, and the various writers upon the subject of patent law have formulated definitions of the same based on such decisions. For present purposes it is deemed advisable to adopt, in general, the definitions given by Robinson in his Law of Patents.

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(1). *Art.* This writer defines an "art" as—

> * * * an act or series of acts performed by some physical agent upon some physical object, and producing in such object some change either in character or condition.

It will be observed that this definition gives the word a somewhat limited significance. In fact, as employed in the Statutes and the Rule under consideration, it is regarded as practically synonymous with the term "process or method". (Walker on Patents, 5th edition, sec. 3; Cochrane v. Deener, 11 O. G. 687, 94 U. S. 780; Corning v. Burden, 15 How. 252). At this point, therefore, it is thought advisable to briefly mention some of the general principles of the law relating to processes.

In the first place, it is desired to direct attention to the decision of the Court of Appeals of the District of Columbia in the case of In re Weston, 94 O. G. 1786, C. D. 1901, 290, where after considering a large number of decisions relating to the law of processes, the court formulated the following rules:

> First: that processes involving chemical or other elemental action, if new and useful, are patentable;
>
> Second: that a process, which amounts to no more than the mere function of a machine, is not patentable;
>
> Third: that a process or method of a mechanical nature not absolutely dependent upon a machine, although perhaps best illustrated by mechanism, may if new and useful, be the proper subject matter of a patent.

The first of these propositions will be found supported by numerous decisions, (Risdon Iron and Locomotive Works v. Medart, 158 U. S. 68, C. D 1895, 330; Westinghouse v. Boyden Co., 170 U. S. 537, C. D. 1898, 443; Ex parte Rogers and Winslow, 87 O. G. 699, C. D. 1899, 95).

In regard to the second, it should be understood that the mode of operation of a machine may constitute a valid process, particularly if conceivable independented of such But, as stated by the Court of Appeals in the case of In re Tallmadge, C. D. 1912-434, where the process is simply the function or mode of operation of a machine, it is not an invention but at most the result of one.

In regard to the third class of cases above mentioned, the court pointed out that the criterion is whether the process can be performed by hand or by other mechanism than that exhibited. This class of cases has led to considerable diversity of opinion among the courts, but the

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question was finally settled by the Supreme Court of the United States in the Expanded Metal Case, 214 U. S. 366, the holding there being that a process consisting of purely mechanical operations may be patentable.

A process which amounts to nothing more than the necessary and obvious manner of producing an article, is not patentable, (Ex parte Trevette, C. D. 1901, 170). But in cases where doubt exists as to whether the invention should be expressed as a process or an article, it is permissible to allow both kinds of claims, (Ex parte Kilbourn et al., 221 O. G. 737). Also, it has been held, that where an apparatus and process are so closely related as to moke it difficult to determine in which the invention lies, claims to the two should be prosecuted and patented concurreuntly, in order to avoid any question of anticipation of one by the other, (Ex parte Edison, 220 O. G. 1373).

There are also other well defined rules concerning the question of patentability of processes to some of which attention may be briefly directed. Thus, it is well settled that a mere principle or law of nature or scientific fact cannot be monopolized by means of a patent. In the case of Morton v. N. Y. Eye Irfirmary, supra, a patent for the use of ether to produce insensibility especially during surgical operations, was held invalid on the ground that it involved a mere discovery or use of a scientific fact and did not constitute a patentable invention. Also in the well know case of O'Reilly v. Morse, supra, a broad claim for the use of the electric current for producing characters at a distance was held to be for the exclusive use of a principle of nature and declared void.

A claim broadly to the use of a thing does not cover a valid process. Such a claim includes no steps of procedure (Ex parte Mayall, 1873 C. D. 134; Morton v. N. Y. Eye Infirmary, supra).

A mere process of nature cannot be monopolized but, of course ,a valid process may exist where forces of nature are employed under conditions designed to produce a useful result. (Cameron Septic Tank Co. v. Village of Saratoga Springs, supra.)

In the early history of patent law in England patents for processes were generally regarded with disfavor and

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were held invalid as constituting attempts to monopolize a principle or scientific fact. The courts of this country have never refused to recognize the patentability of this class of inventions and where the validity of patents have been attacked on the ground that they cover a mere principle of nature, the courts have generally construed them as involving valid processes or means for utilizing such principles. (Tilghman v. Proctor, 102 U. S. 707; Telephone Cases, 126 U. S.; Le Roy v. Tatham, 14 How. 156; Cameron Septic Tank Co. v. Village of Saratoga Springs, 159 Fed. 453).

(2). *Machine.* A machine is defined by Robinson as—

> * * * an instrument composed of one or more of the mechanical powers, and capable, when set in motion, of producing by its own operation, certain predetermined physical effects. Robinson, vol. 1, sec. 173.

Walker defines the term as—

> * * * a combination of heterogeneous mechanical parts, adapted to receive energy, and apply it to the production of some energetic result.

The function of a machine has been defined as that power or property of a machine of acting in the specific manner designed or intended by its combination, or in ather words, it is that which the machine is designed to do, as distinguished from the machine itself, (Deanning Wire and Fence Co. v. American Steel and Wire C., 169 Fed. 193).

(3). *Manufacture.* This term has a somewhat general significance and embraces a promiscuous class of inventions. The term is defined as—

> an instrument cdeated by the exercise of mechanical forces and designed for the production of mechanical effects, but not capable when set in motion, of attaining by its own operation to any predetermined result.

Certain decisions of the courts are to the effect that this term icnludes whatever is made by the hand of man that is neither an art. machine, composition of matter, or design, (International Mausaleum Co. v. Sievert et al., 213 Fed. 225; Cincinnati Traction Co. v. Pope, 210 Fed. 443).

(4). *Composition of Matter.* Robinson definies this expression as—

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> * * * an instrument formed by the intermixture of two or more ingredients, and possessing properties which belong to none of these ingredients in their separate state.
> Robinson, vol. 1, sec. 192.

The law relating to this phase of the rule is extensive and detailed and a discussion of it withinh the limits of this paper is impossible. Attention is directed to the clear and comprehensive treatise by Principal Examiner Lewers on the subject of composition of matter which was read before the examining corps on Oct. 29, 1914.

(5). *Improvement.* This term is defined as—

> * * * an addition or alteration in some existing means, which increases its efficiency without destroying its identity.
> Robinson, vol. 1, sec. 210.

The term necessarily implies the existence of something which is modified to increase its efficiency. The improvement must, of course, involve invention in order to be patentable.

INVENTED OR DISCOVERED.

While these words are used in the alternative in the rule and statute, they seem to possess practically the same significance. Writers like Robinson and Walker attempt to draw no distinction between them. (Robinson, vol, 1, sec. 83; Walker, secs. 2, 25). The term "invention" as hereafter employed will, therefore, be considered as equivalent to the expression "invention or discovery."

The courts have attempted to lay down no fixed rule as to what constitutes invention. On this point the Supreme Court of the United States has said:

> The truth is, the word cannot be defined in such manner as to afford any substantial aid in determining whether a particular device involves an exercise of the inventive faculty or not.
> McClain v Ortmayer, 141 U. S. 427.

Every invention, as pointed out in the decisions and text books, must consist of two elements, an idea conceived by the inventor and an application of that idea to the production of practical results, (Robinson, vol. 1, sec. 77), but this generalization affords little or no aid in deciding whether invention is present in any given case. But, as stated by Walker, while no affirmative rule exists by which to determine the presence or absence of invention in any case, there are certain negative rules which oper-

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ate by process of exclusion, (Walker, sec. 24). Brief refernce will now be made to same of these negative rules.

The result accomplished by the mere exercise of mechanical skill is not invention. (Atlantic Works v. Brady, 107 U. S. 199; Lord et al. v. Payne, 190 Fed. 172; Wagner v. Meccano Limited, 246 Fed. 603).

An assemblage of elements which does not coöperate to produce a new result, or an old result in a new and improved way, is not an invention. (Pickering v. McCullough, 104 U. S. 310, 21 O. G. 73; Reckerdorfer v. Faber, 92 U. S. 357; Mead Morrison Mfg. Co. v. Exeter Mch. Work, 215 Fed. 731; In re Harris, 170 O. G. 484). But where the elements act together either simultaneously or successivly to produce a new and useful result, invention is present. (Burdette-Rountree Mfg. Co. v. Standard Plunger Elevator Co., 196 Fed. 43; National Tube Co. v. Aiken, 163 Fed. 254; Railway Supply Co. v. Hart Steel Co., 217 O. G. 699). The fact that an assemblage of elements will not operate without the mediation of an operator or the thing or operated upon, does not render it an unpatentable combination. (Krell Auto-Grand Piano Co. v. Story & Clark, 206 O. G. 313; Oskosk Grass Matting Co. v. Wait Grass Casper Co., 207 Fed. 937). Where an improvement is made in one element of an old combination, the invention lies is such improvement, and it should be claimed *per se* and not in combination. (In re McNeil, 100 O. G. 2178, C. D. 1902, 563; Langan v. Warren Axe and Tool Co., 166 O. G. 986, 184 Fed. 720; In re Ratican, 162 O. G. 540). But in such case if the improved element coöperates with the other elemtns to produce a new result, the invention is in effect a new combination and may be properly protected as such. (Ex parte Baker, 183 O. G. 505; Ex parte Mumford, 206 O. G. 878).

The application of an old machine or combination to a new use is not in itself an invention. If in such case, however, the new use is so remote from the old that the application to the new use would not occur to the ordinary mechanic, or if by such application a new and beneficial result is obtained, the conception of the new use for the old device amounts to an invention. (Warren Webster Co. v. C. A. Dunham Co., 161 O. G. 531; Hobbs v. Beach, 180 U. S. 397. C. D. 1901, 311).

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It is not invention to modify an existing combination by substituting an equivalent for any of its parts. An equivalent is defined as "a thing which performs the same function, and performs that function in substantially the same manner as the thing of which it is alleged to be an equivalent". (Walker, sec. 354). However, if the substitution results in a new mode of operation or new and improved results are obtained, the change may constitute invention. (National Regulator Co. v. Powers Regulator Co., 160 Fed. 460; Archer et al. v. Imperial Mch. Co., 202 Fed. 962).

There are also numerous other well established rules. Thus, it has been held that the following modifications of a prior structure do not, in general, constitute invention:

> Change of material; change in form, size or location of parts, reversal of parts, or duplication, or multiplication or omission of parts.

It is to be understood, however, that these rules are not rigid in character and the cases are numerous in which exceptions to them have been announced. In general it may be said, that where the modification of the old structure results in a new mode of operation or produces new and useful results, invention is present. The following cases relate to the last mentioned rules, and in a number of them it will be found that exceptions to these rules were made and invention was held to be present: Archer et al. v. Imperial Mch. Co., 207 Fed. 81; Hogan v. Westmoreland Co., 163 Fed. 289; In re Harbeck, 191 O. G. 586; Streit v. Harper et al., 143 Fed. 981; Ajax Metal Co. v. Brady Boss Co., 155 Fed. 409; Ex parte Cooper, 200 O. G. 583; United States Hoffman Co. v. Tosance, 202 Fed. 923; Berry v. Schaefer, 205 Fed. 49; Lambert Hoisting Engine Co. v. Ledgerwood Mfg. Co., 154 Fed. 372; Ex parte Sears, 148 O. G. 279; Goss Printing Co. v. Scott, 108 Fed. 253; Potts v. Creager, 155 U. S. 608, C. D. 1895, 143; Edison Electric Light Co. v. U. S. Electric Lighting Co., 52 Fed. 308.

CONDITIONS PRECEDENT TO GRANT OF VALID PATENT.

An inventor who has originated a patentable art or device in the field of patentable invention heretofore men-

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tioned, is entitled to the benefits of patent protection provided certain conditions precedent exist. Thes conditions are set forth in the rule and will be considered in order.

Novelty.

In the first place an invention must be new. It is not sufficient that it be new or original to the person seeking a patent; it must be new to the public and first made accessible to them by the efforts of such inventor. The rule under consideration specifies certain negative conditions necessary to the existence of novelty, which conditions will later be discussed.

Utility.

An invention to be patentable must also be useful; i. e. it must be capable of beneficial employment by the public. The degree of utility is immaterial, and it is also immaterial that the invention is capable of improvement or that similar inventions possess greater utility. (International Tooth Crown Co. v. Hanks Dental Association, 111 Fed. 916; Crown Cork and Seal Co. v. Aluminum Stopper Co., 108 Fed. 845). Commercial success is also unnecessary. (Lovell-McConnell Co. v. Automatic Supply Co., 212 Fed. 192). But utility is not present if the invention is frivolous or worthless, or if it is detrimental to the well being and injurious to the morality of the public, or of such a character as to mislead the public to its disadvantage. (Schultze v. Holtz, 82 Fed. 448; Fuller v. Berger, 120 Fed. 274; Heide v. Panoulias, 188 Fed. 914).

Prior Knowledge and Use.

To be patentable an invention must not have been "known or used by others in this country" before the same was originated by the person seeking a patent. This provision specifies one of the conditions necessary to the existence of novelty of an invention.

It is to be noted that prior knowledge and use of an invention will defeat novelty only where such knowledge and use existed "in this country". Knowledge and use of an invention in a foreign country is immaterial unless, of course, the person in this country was aware of the same before his own conception of the invention, in

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which case he would not be an inventor at all and a patent issued to him would would be invalid. The fact that an invention was used in a foreign country and persons in this country had knowledge of such use before its invention in this country, is not sufficient to defeat a patent to the *bona fide* inventor in this country. (De Kando v. Armstrong, 165 O. G. 1185; Doyle v. Spaulding, 19 Fed. 75). And it has been held that where an inventor in this country after making an invention but before filing an application, obtained information that the invention had been known and used in a foreign country, this fact did not invalidate the patent on the ground of lack of novelty. (American Sulphite Pulp Co. v. Howland Falls Pulp Co., 80 Fed. 389). In short, the knowable thing must be in this country.

The expression "known or used" has been made the subject of consideration in umerous decisions. It seems to be well established that the word "known" signifies more than a mere "mental concept" of an invention. As stated by Robinson, (vol. 1, sec. 227), it means—

> such an acquaintance with the invention on the part of the public as renders it available to them as a practical operative means.

Where an invention has been in actual use in a foreign country and knowledge of the same is possessed by persons in this country, such knowledge does not meet the requirement sof the term "known", as interpreted by the decisions. (De Kando v. Armstrong, supra; Doyle v. Spaulding, supra). Furthermore, it has been held that knowledge of a prior conception of an invention, or of unpublished drawings and written descriptions does not render the invention "known" within the meaning of the statutes. (Killeen v. Buffalo Furnace Co. et al., 140 Fed. 43; Walker, sec. 61; Detroit Lubricator Mfg. Co. v. Renchard, 9 Fed. 293; Pennsylvania Diamond Drill Co. v. Simpson, 29 Fed. 291). On the other hand, in regard to the term "use", it has been held that where a device was actually in existence in this country, applied in a concealed position to a tea chest imported from Japan, but was not actually known to persons in this country, such existence was held to constitute no such prior use as to anticipate a patent covering the device. (Acme Flexible

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Clasp Co. v. Cary Co., 96 Fed. 344). Since, therefore, mere knowledge without use or use without knowledge, is not sufficient to make an invention "known or used" within the meaning of the rule, the expression "known and used" would seem to be practically equivalent to "known *and* used". In this connection, attention is directed to the decision of former Commissioner Ewing in the case of Joliffe v. Waldo v. Vermer and Schovick, 234 O. G. 671, in which it was held that prior knowledge to defeat a patent must be knowledge of the actual thing—a physical embodiment of the invention.

There are certain well settled rules as to what constitutes prior knowledge and use of an invention, and brief reference may be made to some of these.

Prior knowiedge and use will defeat an invention only when such invention and the thing alleged to anticipate are identical from the inventive standpoint. This does not mean that there must be identity in mere physical embodiment, but that the functions performed and the means to perform them must be substantially the same. (Walker, secs. 62, 65). Prior use to be effective must have been so far understood and practiced or persisted in as to have become an established fact, accessible to the public and to have contributed definitely to the sum of human knowledge. (Diamond Patent Co. v. Carr Co., 217 Fed. 400; Coffin v. Ogden, 18 Wall. 120). General use, however, is not necessary and a single well established example of prior use is sufficient to defeat a patent. (Daniel v. Restem & Co., 131 Fed. 469; Benthal Mch. Co. v. National Mch. Corporation, 222 Fed. 918). It is not necessary to constitute the bar of prior knowledge or use, that the invention be actually seen and understood by the public, if the use of the same were such that it was accessible to the public and could have been seen by them. (Perkins v. Paper Company, 17 O. G. 1285). If the prior use of the device was accidental or not understood, or was a mere abandoned experiment, it does not constitute an anticipation of a subsequent invention. (Anthracite Separator Co. v. Pouuock et al., 175 Fed. 108; Warren Bros. v. City of Owassa, 166 Fed. 309). The device set up as a prior use must have constituted an actual and successful reduction to practice, the courts having held that the

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rules as to what constitutes "prior use" and what constitutes "reduction to practice" are the same. (Gilman & Brown v. Henson, 122 O. G. 731). This being true, knowledge of the actual existence of a device of such simple character that its practicability would be apparent without actual use, would constitute such knowledge and use as to defeat a subsequent patent for such device. (Conner v. Dean, 142 O. G. 856; Pool v. Dunn, 151 O. G. 450).

Mention may here be made of certain special cases which appear to fall within the provisions of the law relating to prior knowledge and use. In suits for infringement, under the defense of lack of originality, (Rev. Stat. Sec. 4920), one patent is frequently held to anticipate anticipate another by reason of its earlier filing date in the Patent Office; and in the ordinary practice of the Patent Office, applications for patent are rejected in view of the earlier filing date of prior patents disclosing the invention claimed. The practice in each of these cases is apparently based on the idea that the filing date of the anticipating patent constitutes prima facie evidence that the invention was "known or used" at that date. (Lemley v. Dobson-Evans Co., 243 Fed. 391; 246 O. G. 1203; Millet and Reed v. Duell, 96 O. G. 1241).

It should be clearly understood that the length of time an invention is known and used before it was originated by the applicant for patent is immaterial. It is a bar if it occurred any time "before" the invention by such applicant. Prior knowledge and use should not be confused with the bar of public use, which will be considered later, and which has reference to whether an invention was known and used by the public for more than two years before an applicatipn for patent was filed.

An examination of published decisions of the courts will show that patents are frequently held invalid on account of the invention having been known and used before it was invented by the patentee. This cannot be avoided, as the Office has no means of determining whether or not an invention was known or used before it was originated by the person seeking a patent. In this connection, it may be noted that where an employee of the Office is aware of prior knowledge and use of invention,

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this fact may be made the basis for rejecting an application for patent covering such invention. (Rules 66. 76).

Prior Patenting and Publication.

An inventor cannot obtain a valid patent if his invention was "patented or described in any printed publication in this or any foreign country before his invention or discovery thereof, or more than two years prior to his application". This provision of the rule sets forth further conditions necessary to the existence of novelty.

It should be clearly noted that the prior patenting or publication may be "in this or any foreign country". In this respect the bar of prior patenting or publication differs from that of prior knowledge and use or prior public use, which must exist in this country. It should also be noted that the bar of prior patenting or publication is a bor under two conditions; first, if it occurred before the invention was made by the patentee or applicant for patent, and second, if it occurred more than two years before application for patent was filed. In the first case, the patentee or applicant would not be the first inventor and a patent to him woulde invalid; in the second, the prior patent or publication is a bar even though the invention disclosed therein was made by such patentee or applicant for patent. (Wagner v. Meccano, Limited, 246 Fed. 603).

An invention may be said to be patented when it is "protected to the inventor" by means of a patent. In order that such patent may bar other inventors it must possess certain requisite, i. e. it must be a public document accessible to the public and fully disclose the invention. (Robinson, vol. 1, sec. 331). A printed publication is anything which is printed, and, without injunction of secrecy is distributed to any part of the public in any country. (Walker, sec. 56; Thatcher v. Inhabitants of Town of Falmouth, 235 Fed. 151). No actual distribution is necessary if the printed matter is exposed for sale or deposited in a public library. Trade catalogs sent only to persons engaged or supposed to be engaged in a certain trade are not publications. (Graham v. Langhaar, 1912 C. D. 92; Union Tool Co. v. Wilson et al., 237 Fed. 837.

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Matter not covered by the claims of a patent is not patented, but as to such matter the patent is, of course, a publication from the date of its issue. As a refernce, a United States patent takes date from the filing of the application both as to the invention claimed and as to the matter merely disclosed. This practice is well settled and as heretofore indicated is based upon the ida that the anticipating patent constitutes prima facie evidence of prior invention or prior knowledge from the date of the application. (Millet & Reed v. Duell, supra; Lemley v. Dobson-Evans Co., supra).

Concerning the disclosure in prior patents or printed publications the decisions are numerous to the effect that this must be full enough and precise enough to enable any person skilled in the art to which it relates to construct and practice the invention. (Generl Electric Co. v. Haskins Mfg. Co., 224-Fed. 464). It is not sufficient that in the light of the disclosure of the later inventor the germ of the same idea can be found hidden away in the writings of some one before him. (Snook Roentgen v. Stetson Hospital, 237 Fed. 204). The disclosure in the prior patent or publication must be more than a mere hint or suggestion and where invention would be required to embody these hints or suggestions in practical form, the prior patent or publication is no anticipation. (Merrell Soule Co. v. Powdered Milk Co., 215 Fed. 922; Wm. B. Scarfe Sons Co. v. Falls City Woolen Mills, 209 Fed. 210). In fact, it has been held that the patent or publication must actually describe the invention or where a drawing alone is relied on, it must be so clear as to leave no doubt. (Canda v. Michigan Iron Co., 124 Fed. 486; U. S. Metallic Packing Co. v. Hewitt Co., 236 Fed. 739).

An application for a process may be anticipated by a prior patent for a machine which fully discloses such process, (Model Bottling Co. v. Anheuser Busch Assn., 190 Fed. 573), and a product by a patent for a machine, (In re Decker, 162 O. G. 999), or a composition by a prior process patent. (In re Griffith, 187 O. G. 517). A mere paper patent, if it fully and completely describes an invention, whether a machine, device or process, is just as effective to show anticipation as a patent which describes an invention which has gone into extensive use. (Hyde

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v. Minerals Separation, Ltd., 214 Fed. 100; Kings County, etc., v. United States Consolidated, etc., Co., 182 Fed. 59). Also a design patent may anticipate a subsequent application for the construction shown in the design. (President Suspender Co. v. McWilliams, 233 Fed. 433; Lein v. Myers, 105 Fed. 962).

In concluding this phase of the subject, a few points relating particularly to foreign patents may be mentioned. It has been held that a device is patented in a foreign country the moment it is sealed or enrolled, that whether or not it is printed is immaterial, and that it is enough that the officials have acted upon the application and granted the patent. It would also seem to be immaterial in what form it is issued providing the specification and drawings are accessible to the public. (Safety Gas Light Co. v. Fischer Bros. et al., 236 Fed. 955; Sirocco Engineering Co. v. B. F. Sturtevant, 213 O. G. 1447). A secret patent is not a patent in the above sense. (Robin v. Miller et al., 1904-C. D. 569). However, it would appear that the German "Gebranchmuster" constitutes a patent within the meaning of the rule. (Safety Gaslight Co. v. Fisher Bros. et al., supra). (The effective dates of foreign patents are as follows: British patent, as a publication the date of publication, as a patent the date when sealed; French patent, as a publication the publié date, as a patent the deliveré date. German and Austrian patents; the Ausgegeben date is effective for all purposes. The Dutch patent date is the Dagteekening date, and the Danish is the Udstedt date.)

Public Use and Sale.

An invention is not patentable if it was in "public use or on sale in the United States for more than two years prior" to the date when application for patent on such invention was filed. A brief statement of some of the general principles of the law relating to public use and sale must suffice for present purposes. In the first place, the use must have been such as to place the invention within the knowledge and control of the public. However, it does not appear necessary that actual knowledge of the invention shall have been conveyed to the public.

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It is sufficient, if the use was such that the invention was accessible to at least one member of the public, other than the inventor. (Perkins v. Paper Co., 17 O. G. 1285). Use of an invention in complete secrecy would not constitute public use, but where an invention is of such a nature that it will be concealed from view during ordinary use, this fact does not prevent its employment in such concealed position by a member of the public from being public use with in the meaning of the law. (Hall v. Macneale t al., 107 U. S. 90; Egbert v. Lippman, 104 U. S. 333; International Tooth Crown Co. v. Gaylord, 140 U. S. 58). In the first case cited, an invention relating to locks for safes was held to be in public use notwithstanding the fact that the locks were hidden from view and could not have been observed without destruction of the safe. In the case of Egbert v. Lippman the Supreme Court of the United States held that the use by one person of corset stays given her by the inventor constituted public use of an invention included in such devices. That use of a single device by a single person is sufficient to constitute public use has also been held in numerous decisions. (Egbert v. Lippman, supra; Bradley v. Eccles, 138 Fed. 911; Hentschel v. Carthage Sulphite Co. et al., 169 Fed. 114; National Cash Register Co. v. American Cash Register Co., 178 Fed. 80). The use of an invention in the ordinary course of trade and primarily for profit, if accessible to the public, constitutes public use. However, in any case where the charge of public use arises against an invention, it may be overcome by showing that such use was under the control and surveillance of the inventor and was intended for experimental purposes. Experimental use of an invention in public, especially where publicity is necessary to the experiment, is not public use within the meaning of the rule. An inventor may take reasonable time to test his invention and perfect the same before applying for patent and if he proceeds in good faith it is immaterial that such use took place more than two years before the date of application for patent.

In the well known case of Eilzabeth v. Pavement Co., 97 U. S. 126, the use on a public street of a section of block pavement for a period of six years before the date of application for patent, was held not to constitute a public use of the invention. In this case the nature of

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the invention was such that it could not be satisfactorily tested except in actual use for a considerable time upon a highway and the evidence showed that the inventor kept the invention under observation and manifested no intention to sell the same or allow it to get beyond his control. The experimental test of an investigation may be continued for such time as is reasonably necessary to investigate its utility, but when the same is completed the bar of two years begins to run and the application for patent should be filed within that time. (Eastman v. Mayor etc. of City of New York, 134 Fed. 844; International Tooth Crown Co. v. Gaylord, supra). Furthermore, it has been held that the doctrine of experimental use does not apply where an invention is employed publicly and commercially for more than two years before the application for patent and where during such time experiments were made, not to test out the commercial practicability of the very thing invented, but merely for the purpose of strengthening and improving the machine. (American Ballast Co. v. Davy Burnt Clay Ballast Co., 220 Fed. 887). The sale of products made during the experimental operation of a machine dies not constitute public use of the machine. (Daniel Green Felt Shoe Co. v. Dolgeville Felt Shoe Co., 205 Fed. 745; Penn. Electrical Mfg. Co. v. Conroy, 159 Fed. 493). The same would doubtless be true of a process and product produced thereby. In general it may be stated that where public use or sale of an invention is shown to have taken place more than two years before the date of application for patent, the burden is upon the patentee or applicant to show by full, clear and convincing proof that such use or sale was intended for experimental purposes. (Swain v. Holyoke Mch. Co., 109 Fed. 154. 97-09, 399).

In regard to the expression "on sale" it appears that if a device is offered for sale though not actually sold, it is on sale within the meaning of the statute. (Plimpton v. Winslow, 14 Fed. 921; Wende v. Horine, 225 Fed. 501; Burke Electric Company v. Independent Tool Co., 234 Fed. 93). But a mere contract to construct from plans and to deliver in the future a machine not previously built is not sufficient to establish that an invention embodied in such machine was "on sale" at the time of such

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contract. (McCreery Engineering Co. v. Massachusetts Fan Co. et al., 195 Fed. 498). A single unrestricted sale or offer to sell a single device involving an invention is sufficient to constitute a placing of the invention on sale. (Covert v. Covert, 106 Fed. 183; Swain v. Holyoke Machine Co., 109 Fed. 154; In re Mills, 117 O. G. 904; Consolidated Fruit Jar Co. v. Wright, 94 U. S. 94). But where the invention is sold for experimental purposes and with a view to test its utility, such sale does not come within the inhibition of the statute, and this is particularly true where the inventor is obliged to place the invention in other hands for the purpose of experiment. (In re Mills, supra, Graham v. Mfg. Co., 11 Fed. 142; Swain v. Holyoke Machine Co., 109 Fed. 154).

In concluding this phase of the subject it should perhaps be emphasized that public use and sale constitutes a bar to the grant of a patent only where such use and sale takes place more than two years before the application for patent. Such use or sale occurring two years or less before that time is immaterial and does not prevent the issuance of a valid patent. It shoud also be clearly understood that more than two years public use of an invention bars a valid patent whether the invention so used was made by the patentee or applicant for a patent, or was made by some independent inventor. In other words, after two years public use of an invention, it becomes public property and no one is entited to monopolize the same regardless of its origin. Use and sale in a foreign country is no bar to the grant of a patent in this country even though persons in this country had knowledge of such use and sale. In this connection it may also be noted that two years public use and sale of a device bars only such inventions as were present in such device. If the invention patented or sought to be patented is inventively different from the thing which was used or sold, the bar of public use or sale does not apply.

Public Use Proceedings.

The question of twe years public use or sale of an invention generally arises in connection with infringement suits but this question is also of some practical importannce in connection with the examination of applications.

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The practice of the Office permits under certain conditions the institution of public use proceedings for the purpose of determining whether the bar of public use or sale exists against the grant of a patent. The authority of the Commissioner to institute such inquiry has been upheld by the court. (Ex parte von Heffner-Altneck, C. D. 1883, pg. 139). The proceedings may arise in ex parte cases or in connection with interferences. The general procedure in these cases will be briefly outlined.

In ex parte cases the proceedings are originated by a petition or protest to the Commissioner from some member of the public opposing the grant of a patent to an applicant. The petition should be accompanied by affidavits setting forth the facts alleged to establish the bar of public use, and also by an offer to produce the witnesses and bear the expenses of the proceedings. Proof of service of the petition and affidavits upon the opposing party should also be filed. The papers are generally transmitted to the Primary Examiner for consideration. If in his opinion a prima facie case of public use is made out he so reports to the Commissioner, who thereupon may require the party whose application is concerned, to show cause why the proceedings should not be instituted. A preliminary hearing is generally had at which both the petitioner and applicant may be heard. After such hearing, if the Commissioner orders that the proceedings be instituted, times are set for the taking of testimony by the petitioner and applicant. When filed in the Office the testimony is first considered by the Primary Examiner. It is not the practice for the Primary Examiner to grant an inter partes hearing but briefs may be filed. The Primary Examiner should render a decision similar to the decision in an inteference case, analyzing the testimony, and making a holding as to whether or not a bar of public use is made out. A copy of this decision should be furnished to both parties. In case the Primary Examiner holds that a case of public use exists he should reject the application to which the bar applies and also take such further action as the condition of the case requires. From such action an ex parte appeal lies, as in the case of other rejections. If after consideration of the testimony the Examiner holds that the bar of public

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use has not been established, this concludes the proceedings as the petitioner has no right of appeal from such decision. (Ex parte Van Ausdal, C. D. 1900-74; Siebert v. Bloomberg, C. D. 06-325; Ex parte Booth Bros., C. D. 1907-140; Betts v. Gerson, C. D. 1913-83; Ex parte Hartley, C. D. 1908-224).

Where the question of public use arises in connection with interferences the procedure is somewhat varied but in general differs from that in ex parte cases. Where no testimony has been taken and a petition for public use proceedings is filed, sufficiently supported, it seems to be the practice to suspend the interference and investigate the question of public use. (Sarfert v. Meyer, 1902 C. D.-30, in re Wood Preserving Co. -1910 C. D. -47; Sanford Mills v. Aveyard, 1899 C. D. 129). The testimony on priority taken in interference cases not infrequently establish a prima facie case of public use of the invention and in such cases petition is often made to suspend the interference and consider the bar of public use. The rule, however, appears to be well established that after the initial stages of an interference have been passed, it will not be suspended for the purpose of instituting public use proceedings, and this is particularly true where the bar if established would not apply to all parties. (Knisely v. Kaislive, 1912 C. D. -13; Luellen v. Clausen and Claus, 1913, C. D. -97). Where both parties to the interference are applicants and where the public use would act as a bar against both, the rule in regard to suspension does not appear to be rigidly followed and in the case of Niedringhaus v. Marquard v. McConnell, 1905, C. D. -405 and 1906-C. D. 91, involving this state of facts, the interference was suspended after the decision of the Examiners-in-Chief on th equestion of priority. Where an interference is suspended to consider the question of public use the parties concerned are given opportunity to take testimony on this question as in ex parte cases. (Ex parte Weber, 1902 C. D. 457). In the case of Ex parte Deere and Mausur Co., 105 M. S. D. 96, it was held that after the testimony is filed and printed, the Primary Examiner should proceed under the provisions of Rul 128, set an inter partes hearing as to the parties involved in the interference, and that if in his opinion a case of pub-

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lic use is made he should dissolve the interference and fix the usual limit of appeal from his decision. As Rule 128 has been changed since the date of this decision, the procedure above outlined would now presumably take place before the Law Examiner. Where an interference proceeds to final judgment of priority this fact does not prevent the losing party from raising the question of public use against the winning party. The two questions are different and the decision of one is not res adjudicata as to the other. (In re Pittsburgh Brake Shoe Co., 1912 C. D. -78).

Abandonment.

The last clause of the rule to be considered relates to abandonment. If an invention meets the other requirements of the rule it is patentable "unless the same is proved to have been abandoned". Abandonment of an invention such as will bar a valid patent may arise in various ways. In the first place the inventor may by express declaration abandon his invention to the public or his conduct may be such as to justify the inference that he intended to relinquish his rights. (Kendall et all. v. Winsor, 21 How. 322). When such abandonment takes place the act cannot be recalled and the invention becomes public proptrey. (Pennock and Sellers v. Dialogue, 2 Peters 1; Crown Cork and Seal Co. v. Aluminum Stopper Co., 108 Fed. 845; 1901, C. D. 450). Such abandonment by declaration or by conduct may take place at any time after the invention is made, and it may occur within two years prior to an application for patent on such invention. (Mast, Foos and Co. v. Dempster Mill Co., 82 Fed. 331; Warren Bros. v. City of Owosso, 166 Fed. 309). Long and unexcused delay between the actual reduction to practice of an invention and the filing of an application for patent has also been frequently held to constitute abandonment of the invention. This is true particularly where during the period of delay an independent inventor enters the field and exploits the invention. (Mason v. Hepburn, 85 O. G. 147; Comptograph Co. v. Adder Machine Co., 200 O. G. 1391; Courson v. O'Connor, 227 Fed. 890; Mower v. Duell, 88 O. G. 191). Another way in which an inventor may expressly abandon an invention

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is by filing an application for patent and formally dedicating to the public the invention disclosed therein. A specific disclaimer of any invention disclosed in an application will also amount to an abandonment of such invention. Mere failure to claim an invention disclosed in a patent does not constitute abandonment of the same. But where the invention not claimed might have been claimed a presumption of dedication to the public exists which, however, may be overcome, if such invention is claimed in a contemporaneously pending application, or, under the proper circumstances, is later claimed in a reissue of the original patent. Where the invention not claimed in a patent is separate and distinct from that claimed, an application for such independent invention may be filed at any time within two years from the date of the original patent, but if no such application is filed within that time the patent becomes a bar as a publication and the invention is in effect abandoned to the public. (Ex parte Mullen and Mullen, 50 O. G. 837). The law is well settled that claims deliberately canceled from an original application cannot be properly inserted in an application for reissue of the original patent. The cancellation of the claims in such case is in effect an abandonment of the invention covered thereby. (Money-weight Scale Co. v. Toledo Computing Scale Co., 187 Fed. 826, 170 O. G. 928). A party involved in an interference may file a declaration of abandonment of the invention, in which case priority is awarded to his opponent. (Rule 125). And it has been held that where a patentee involved in an interference obtains a reissue of his patent, omitting the claims of the issue, this act amounts to an abandonment of the invention by such party and that priority should be awarded to his opponent. (Lattig and Goodrum v. Dean, 1905, C. D. pg. 79 and 698). Ordinarily, delays by an inventor in prosecuting an application for patent where such prosecution complies with the law, cannot be successfully urged in support of a charge of abandonment of the invention. (Crown Cork and Seal Co. v Aluminum Sottper Co., supra; Columbia Motor Car Co. et al. v. C. A. Duerr & Co. et al., 184 Fed. 893). But in the case of Barber v. Wood, 207 O. G. 209, the Examiners-in-Chief held that a party,

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who with knowledge that his opponent was in the field, delibaretly withheld his own invention from the market and neglected to renew his forfeited application, was guilty of such action as constitued abandonment of the invention. And in two cases of recent date it was held that the failure of an applicant to insert claims to an invention in a pending application until long after the issuance of a patent to another party for such invention constituted an abandonment of the invention. (In re Fritts, 227 O. G. 742; Rountree v. Sloan, 227 O. G. 744). By a still more recent decision the Court of Appeals has held that unexcused delay of more than one year by an applicant in copying claims from a patent estops him from asserting his right to such claims. By such delay the applicant in effect abandons the invention. (Wintroath v. Chapman and Chapman, 248 O. G. 1004). In conclusion, it should be understood that public use of an invention, such as heretofore pointed out, for more than two years before application for patent is filed, constitutes an abandonment of the invention; and the same is also true where the application is not filed within two years after the invention has been deliberately placed before the public in a printed publication.

A limited number of copies of the September number of the Journal have been set aside so that those getting acquainted with the Journal for the first time through the October number may have an opportunity to complete their files.

A lecture on "Motor Plows" illustrated by numerous slides and motion pictures will be given by Primary Examiner Frank C. Loeffler, in the Rotunda on the second floor of the Patent Office on Wednesday, October 30, 1918, at 3.30 p. m.

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The United States.

To all to whom these Presents shall come. Greeting.

Whereas Francis Bailey of the City of Philadelphia in the State of Pennsylvania, Printer, hath invented certain Methods, not before known or used, for forming Punches, by which to impress on the . . . Matrices of printing Types, whether such Types be for Letters or Devices as well as to impress on any Metal or other Substance capable of receiving and retaining Impressions various Marks which are difficult to be counterfeited, and the said Invention appears to be useful and important: These are therefore in pursuance of the Act, entitled "An Act to promote the progress of useful Arts", to grant to the said Francis Bailey, his Heirs, Administrators and Assigns, for the Term of fourteen Years, the sole and exclusive Right and Liberty of using, and vending to others the said Improvement, according to the true Intent and Meaning of the Act aforesaid.

In Testimony whereof I have caused these Letters to be made Patent, and the Seal of the United States to be hereunto affixed. Given under my Hand at the City of Philadelphia this Twenty ninth Day of January in the Year of our Lord one thousand seven hundred and Ninety one and of the Independence of the United States of America the Fifteenth.

G. Washington

By the President

Th. Jefferson

City of Philadelphia January 29th. 1791.

I do hereby Certify that the foregoing Letters Patent were delivered to me in pursuance of the Act, entitled "An Act to promote the progress of useful Arts", that I have examined the same, and find them conformable to the said Act

Edm. Randolph
Attorney General
of the
United States

COPY OF THE FIRST UNITED STATES PATENT GRANT OF WHICH THERE IS ANY RECORD IN THE PATENT OFFICE. IT WAS THE FOURTH PATENT ISSUED BY THE GOVERNMENT UNDER THE FIRST PATENT ACT.

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VOL. 1. NOVEMBER, 1918. No. 3

EDITORIAL.

MANUFACTURERS AND THE PATENT SYSTEM.

The War Emergency and Reconstruction Conference of the War Service Committees of the nation's industries assembling at Atlantic City, N. J., on December 4, 5 and 6, signals the beginning of the reconstruction period of this present war. About three hundred industries have war service committees and one of the problems to be considered at the conference is that of rendering assist-

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ance to governmental agencies created to deal with reconstruction.

This journal believes the time opportune to call the attention of the conference and manufacturers generally to the connection of the United States patent system with the industries of this country, and the urgent need of coöperation between manufacturers and inventors on the one hand, and those engaged in the administration of the patent system, on the other.

That the industries of this country are largely based on patent rights is a safe fundamental assertion; that the development of these industries depends on the stability of these rights and their proper growth, is equally certain; that the stability of these rights and their proper growth is not definitely assured in the present execution of our patent system, must be conceded; that the coming reconstruction period will be marked by great manufacturing activity and diversity, is generally accepted; consequently, the present seems a proper time to take up the consideration of our patent system and to plan for the improvement thereof, if any be necessary, or improvement in the carrying out of the system.

The manufacturer affected by patent rights needs not be told he has a vital interest therein; but it may be necessary to point out that he is just the one to take up the question of improvements in the patent system to the end that his business may rest on the sure foundation of an absolutely valid rather than a questionable patent. Manufacturers' associations, along with manufacturers, should be vitally interested in the granting of patents, i. e., in the work of the Patent Office. They constitute a great power which should exercise great influence in the betterment of the execution of the patent system. Organized with a proper committee or committees to study the subject, possibly with a similar committee from those administering the system, existing defects could be located and legislation framed to eliminate them. With the organized manufacturers urging such legislation, its passage would be assured.

The examiners in the Patent Office have already organized into the Patent Office Society having for an object the formulation and execution of plans for the improvement of the patent system. It invites the coöperation of

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manufacturers. This journal is the official organ of the society. Its columns are open to communications from manufacturers; it aims to be a meduim for the interchange of ideas on the subject and to bring together those with a common purpose.

The Patent Office Society has advanced no plan of its own, as yet, for improvements in the patent system. Suggestions are made in papers appearing in this and the October number of the journal which we think are worthy of consideration. But before legislation is formulated, obviously very careful study must be put upon any plan suggested and by all parties affected or interested. Manufacturers will doubtless constitute one of these parties. Their coöperation is, therefore, asked in the suggestion of plans and framing of legislation.

The needs of the Patent Office itself should engage first attention. Its facilities have long been held inadequate, its force of employees too small, and the salaries paid insufficient to secure and hold men with the qualifications necessary to do the work. With the increase in Patent Office work expected with the cessation of the war, the deficiencies in office equipment will become emphasized and conspicuous. We speak of this because it is before us constantly, because it has long been recognized and because it results in an inability to give the inventor at all times what he has a right to expect, viz., a valid patent.

THE WAR AND THE BRITISH PATENT OFFICE.

The report of the Comptroller-General of the British Patent Office, for 1917, shows that the war is having a marked effect on the business of that office. Applications for patents which numbered 30,077 in 1913, dropped to 19,285 in 1917; patents sealed dropped from 16,599 to 9,347 in the same period; applications for designs dropped from 40,429 to 13,208; applications for registration of trade-marks dropped from 9,689 to 5,502. The depression, however, seems to have run its course as the figures for 1917 show a slight improvement over those of the preceding year.

Of the 681 employees of the office, 183 were serving with the colors and 87 were on loan to other departments.

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ABANDONMENT OF INVENTION BY SECRET PRACTICE.

TO THE EDITOR:

Concerning the case of Macbeth-Evans Glass Company against General Electric Company, 231 Fed. 183, which is discussed somewhat at length in the very interesting article by the Honorable Assistant Commissioner in the September issue of your publication, I would like the privilege of saying a few words since I had the rather dubious distinction of being one of the counsel in that case whose argument did not apparently meet the approval of the courts which decided the case against the patentee.

As I look at it, the question involved, broadly stated, was, can an inventor obtain letters patent on a method of making glassware, which invention (the method) he practiced in secret, but not in public, for more than two years, but the product of which he has sold to the public for more than two years before he filed his application? Stated in other words, does the Patent Statute, as it stands, hold out to an inventor so circumstanced, an invitation to disclose his invention or secret process so that the public may obtain the benefit thereof in return for a limited term patent monopoly; or does the invention (the secret process) under such circumstances become abandoned, within the purview of the statute to a public which becomes possessed of knowledge of the invention only through the patent, as was the case here?

The case was absolutely *sui generis* as has been held by both the lower court and the upper court.

His Honor, Judge (now Justice) Clarke in the District Court, stated in his opinion (record, page 40):

> "The industry of counsel and of the court has failed to discover any decision of these questions by any court, and therefore they must be decided upon principle unaided by direct authority."

The Court of Appeals in the opinion complained of held that under the facts stated, the invention, i. e., the secret process, has become abandoned to the public, a finding which it seems to me not only constitutes judicial

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legislation but also repudiates the contractual obligation of the Government arising out of the grant of the patent in exchange for disclosure of the secret and destroys the validity of all other similarly issued patents, and this after it is too late to re-invest the patentee with the exclusive knowledge and enjoyment of his secret.

Treating this as a matter of "public policy", it seems to me that the importance of leaving such questions to Congress is shown in this particular instance because Mr. Judge Clarke in the District Court in finding the patent invalid apparently favored the view that because the secret use of the process was accompanied by sale of the product therefore it constituted "public use" under the statute, while the Court of Appeals clearly did not favor this view but ruled that the patent was bad because of "abandonment". Still another view is expressed by the Honorable Assistant Commissioner who favors the *conclusion* of the court but apparently does not agree with the reason given for the conclusion by either of the two courts. Thus, we have a noteworthy example in this case of three different views of the law all from competent authorities, which certainly would seem to raise a question as to the correctness of the conclusion.

That the Court of Appeals for the Sixth Circuit was unwilling to follow the argument of the lower court as to public use, but instead reached the conclusion that the secret use of the process with sale of the product constituted "abandonment" under the statutes is shown by the following quotations from the opinion of the Court of Appeals:

> "It is not necessary, we may observe, to consider the portion of the decision below which deals with the question of public use. Our consideration will be limited to questions pertinent to abandonment."

And again,—

> " * * * there are some difficulties in the way of concluding that secret use of the process resulting in public use and sale of the product constitutes the statutory public use of the invention."

The conclusion as stated by the Court of Appeals was as follows:

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> "We are thus led to conclude that whatever view may be taken of the conditions existing at the time the patent in suit was applied for, the invention had been abandoned. Accordingly upon this ground the decree will be affirmed."

In a decision of the Supreme Court (Bates vs. Coe, 98 U. S. 31), it is said:

> "Inventors may, if they can, keep their inventions secret; and if they do for any length of time, they do not forfeit their right to apply for a patent, unless another in the meantime has made the invention, and secured by patent the exclusive right to make, use and vend the patented improvement. Within that rule and subject to that condition, inventors may delay to apply for a patent."

In Parks vs. Booth, 102 U. S. 105, the court said:

> "Inventors may, if they can, keep their inventions secret; but if they do not, and suffer the same to go into public use for a period exceeding what is allowed by the Patent Act, they forfeit their right to a patent."

While it is true that the above statements in these two cases were not necessary to their decision, these are the unmodified statements of the Supreme Court interpreting the law of 1836, which is practically the law as it now stands, and to which it was changed after the decision of the Supreme Court in Pennock vs. Dialogue, 2 Peters 1, evidently for the purpose of distinguishing between "secret" uses and "public" uses to show that public uses only were intended as a bar to the grant.

It would seem from the opinion of the Court of Appeals that if it should be held the conduct of the patentee referred to does not in fact under the law and authorities constitute "abandonment" under the statutes then the patent is in compliance with the requirements of the statute as existent at the time the application was filed, and the validity of the patent should have been sustained; or to put this in other words, it would appear from the opinion of the court, that if the ruling as to "abandonment" is in error, for the court now to hold the patent invalid would be to base a conclusion upon the court's idea as to some matter of public policy; yet determination of questions of that character is properly for the Congress in the formulation of statutory enactments, and for any court to impose such a bar would constitute judicial legislation obnoxious to the rule laid down by the Supreme Court in the case of Henry vs. Dick (224 U. S. 1). While the Court of Appeals in the decision in Mac-

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beth-Evans Glass Company vs. General Electric Company refers to the fact that in a more recent case the Supreme Court had, in terms, distinctly overruled the case of Henry vs. Dick with respect to the particular points there in controversy, it is nevertheless submitted that there is nothing in the present attitude of the court to show that it does not still adhere to the proposition advanced in many cases, that determination of controversies on vague general grounds of public policy is unwise, and constitutes a judicial usurpation of the legislative functions of Congress.

It is submitted that the law should concern itself but little with the question whether or not any particular inventor or patentee has made a profit or suffered a loss out of the practical operation of his invention. In the Macbeth case the courts have penalized the applicant Macbeth on the theory that the sale of the product was necessarily repugnant to the welfare of the public, because the patentee had acquired some profit from such sale. If he had destroyed the glass made in secret, logically according to the court's rulings he could still have secured a valid patent even after twenty years. Why then is he to be penalized for giving the public the benefit of use of the product? It may well be asked whether, if the operations and the placing of the product on the market had resulted in a financial loss to the patentee, the same rule would have applied. In other words, to make the determination of this matter turn upon the question whether or not, out of the secret use of the process, the inventor had incidentally made some profit, is obviously to class the question of either profit or loss on the part of the inventor as superior to the general question of public interest involved in the desirability of having the possessor or owner or discoverer of any valuable trade secret induced to surrender that and disclose it fully to the public in an application, in exchange for a limited term of patent protection.

With respect to the doctrine of abandonment, it is further to be observed that this should necessarily involve the idea of transferring to the public certain rights in the invention of which the public can not be thereafter divested by any action either of the particular inventor concerned or some other inventor. Thus for example,

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had Macbeth died without disclosure of his secret, it must be recognized that a later discoverer of the secret process could have gone in at any time on discovery of the secret and obtained a valid patent therefor. Thus, the assumed "abandonment" held by the court would have been apparently subject to revocation by subsequent application on the part of an independent discoverer. Study of the authorities plainly shows that to constitute real "abandonment", not only must there be found to have been an intent to abandon, but the actual act or acts constituting abandonment must have vested in the public free right to the enjoyment of the invention in a manner such that no subsequent occurrence or action, either on the part of the first inventor, or any other inventor or discoverer, could have recalled from the public such right of enjoyment.

That an abandonment is absolute and can not be recalled see Pennock vs. Dialogue, 2 Pet. 1, in which the court said:

> "where gifts are once made to the public in this way, they become absolute."

The Court of Appeals says Macbeth abandoned to the public. But the record shows that until the application disclosed it to the public, the public did not have knowledge of the invention.

Paragraph 5 of Section 4220 R. S. relates to the defense of public use and abandonment, and is as follows:

> "Fifth. That it had been in public use or on sale in this country for more than two years before his application for a patent, or had been abandoned to the public."

In the above quotation from the statute regarding abandonment it is clear that it is specifically an abandonment "to the public", and it is difficult to conceive how anything can be held to have become abandoned to the public where the public did not come into possession of the information on the strength of which any such abandonment could be predicated, until the inventor in good faith filed his application.

Admitting that the practical effect of a decree sustaining the validity of this particular patent would have been to extend somewhat the profits of the patentee, it may still well be questioned whether or not the public in-

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terest does not suffer more by a finding of invalidity, which is at least open to a charge of bad faith on the part of the Government in obtaining the secret from the inventor in exchange for a promise of protection, and then destroying that protection at a time and under conditions where it is impossible to restore the previous status. The opinion of the Court of Appeals itself recognizes that under the facts presented, this patentee in the enjoyment of his invention as a *secret* process was entirely within his rights; and it must be assumed that under some circumstances at least such enjoyment of secret rights might continue for many years; as it is known to have continued in connection with some secret processes even for generations, descending from father to son. Should it not, then, be accepted as a true rule of justice that any holder of such valuable trade secret was entitled to an interpretation of the statute law which should require as an element of good faith on the part of the Government, that any bar or prohibition or limitation to his right to obtain letters patent should be expressly made clear in the statute, so that he might not be misled to his damage into surrendering up his secret process in an application containing full disclosure published at large in the Patent Office papers, only to suffer thereafter an entire destruction of his property?

Furthermore, when Congress wrote into the Patent Act "public use" where before the act only read "use", it would seem to be clear, from the language employed, that Congress specifically distinguished between public use and secret use. If Congress did not intend to distinguish between public and secret use (as the Court of Appeals has in effect found) then it is clear that the Congress unfortunately adopted language decidedly indefinite and vague. It is submitted that if Congress did not intend to distinguish between public and secret use, then it was the duty of Congress to employ language sufficiently plain to avoid leading any inventor who might seek the protection of a patent into such a pitfall as seems to have entrapped this patentee.

Yours sincerely,

PAUL SYNNESTVEDT.

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(NOTE—Mr. Clay has read the foregoing letter of Mr. Synnestvedt and has made the appended comment.)

I think Mr. Synnestvedt has overlooked the point that Macbeth in relying on secrecy rather than a patent, must take the risk of his secret being found out. It was found out before he applied for patent, and therefore it was not Macbeth, but others who first disclosed the invention to the public.

F. W. H. CLAY.

October 9, 1918.

THE NEED OF A SECONDARY PATENT CLASSIFICATION BASED ON INDUSTRIAL ARTS.

By William L. Thurber, Examiner.

There is probably nothing relating to the U. S. Patent Office of greater importance than its system of classification. Before any patent can be granted it is the duty of the patent examiners to ascertain whether anything of substantially the same nature has been patented before. The number of patents is increasing so rapidly that the time necessary to search those previously granted is becoming a very serious matter. Much thought, time and money have been and are being devoted to providing an arrangement which will limit the field of search as much as possible.

Patents may be classified on two general lines. First, grouping them strictly under industrial art or trade names; for instance, Wood Working, Metal Working, Stone Working, Weaving, Printing, Book Binding, Steam Engines, Gas Engines, Water Pumps, Air and Gas Pumps, Water Meters, Gas Meters, Ships, Furniture, etc., titles with which people of average information are familiar.

The second method is to group them according to those resemblances which are deemed to be of most importance in making searches for anticipating claims. Thus if it is found that in examining either wood-sawing, metal-saw-

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ing or stone-sawing machines it is more frequently necessary to search the other "sawing" groups than it is to search machines for working on the particular material mentioned, but in other ways than sawing, then the sawing machines should be brought together in one class. When so collected they would probably be so arranged as to associate machines having the greatest structural resemblance regardless of the material upon which they might operate. Going a step further it may be found that certain parts of these sawing machines, for example, work-holding devices, carriage-reciprocating mechanisms, automatic stop motions, etc., are indistinguishable from those used in printing, punching, grinding, planing and other machines. This being the case, these parts would be assembled into their respective groups.

Again, there is a strong resemblance either in whole or part between fluid motors, pumps and meters. Many times by omitting the titles and perhaps the disclosure of some very subsidiary mechanism, it would be impossible to tell whether the invention claimed related to a motor, a pump, or a meter, or whether it was to be employed with a liquid or gas. When this situation exists it would appear obvious that grouping under the trade titles is not sufficient. Taking a second step with this group also, it may be found that many of the valves employed therein are not at all peculiar to either motors, pumps or meters but are similar to those used with other fluid-handling devices. Thus will be created a broad class of valves.

One could continue almost indefinitely with illustrations of this nature. However, these examples are taken merely to distinguish the two systems without any suggestion as to whether it might be advisable to make the particular classes mentioned.

The second system is the one which has been followed, for the most part, in reclassifying during the last few years. The industrial arrangement which in a crude way was the basis of most of the classes was found to be entirely inadequate for examination purposes. Gradually parts have been taken from the old classes until in many instances only skeletons remain. Sometimes indeed we have had the decency to bury the skeleton.

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These alterations have not been made without creating considerable disturbance. Indeed sometimes it would appear that the many advantages gained are entirely lost sight of frequently because certain patents can no longer be found in places where experienced searchers have been accustomed to find them. There are, however, several very sound reasons why there should exist an industrial art classification destinct from the one we have been preparing. Before presenting reasons for such a classification, it should be most emphatically stated that, for the specific purposes of the Patent Office, there is no intention of suggesting the superiority of such a system over that upon which the office has been engaged. It is believed that that undertaking was projected along the right lines, as far as a single system would permit. It has been hampered in many ways, many errors of judgment have been made, but those who seriously study the problem seem invariably to conclude that the plan of grouping things on their necessary functions, regardless of their ultimate industrial use, is logical and will endure.

Passing now to the industrial basis: it should be borne in mind that the patent system was established for the purpose of providing the public with better ways of doing things. If one is engaged in a certain enterprise he should be able to find, conveniently arranged, in the U. S. Patent Office, those helps which inventors have been providing for him. But if the material in which he is interested has been broken up and the patents for various specific devices scattered around in places convenient for office needs, he will probably obtain few suggestions unless he makes a prolonged and painstaking search. If on the other hand the patents are somewhere arranged on industrial lines, he will be able to locate his particular field and will have some idea of how to start his investigation. He will probably have supposed that this special group is all he needs to look at, but when he discovers on each patent data indicating that it is classified elsewhere on another basis, if he is a person of intelligence he will continue his investigation to the other fields. In this way, without any elaborate explanation he will discover not only those things which were intended for use in his particular art but also those analogous things intended for use in other arts but which may be very well adapted for

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his. In the same way this second system will be helpful to those attorneys who complain that they cannot find anything in the new classes and they cannot understand the definitions. Using the industrial system with which they profess to be familiar as an introduction or index they could be led to the proper places in the more genuinely scientific arrangement. It is probably too much to expect that the attorneys generally will ever understand the latter system very well or be much in sympathy with it. In some ways it is quite intricate. The examiners, however, are not so much affected by this because it is necessary for each examiner to become expert on only a small portion of it, and when he is required to go beyond his particular field he relies on examiners expert in other lines to direct his search. The attorney, however, must, from time to time, search in all the classes, and it is quite an undertaking for him to keep informed on the various ramifications. One thing at least appears quite certain, that he will not attempt to master it while he believes that it is wrong.

In addition to the searches above described there are others to which the office system does not adapt itself no matter how familiar one may be with it. The search sometimes does not depend upon the particular structure employed but rather upon the question whether a certain thing has been accomplished in some particular industrial art, quite apart from the type of structure that might be employed in carrying it into effect. At other times an important advance may be accomplished by some subordinate element which perhaps even the inventor or his attorney did not appreciate and failed to claim. Every experienced classifier knows there are many details which he deems subsidiary to the main types and for all of which he is not able to provide by any arrangement of subdivisions which his ingenuity can devise. If these subordinate features are not claimed there is a chance that the classifier may not appreciate their importance from a particular industrial standpoint, and thus valuable advances may be hidden away, unless the patent can be in some way located from the industrial arrangement.

Turning to a quite different aspect, if this additional system were provided it ought to expedite the work on the one at which the office is engaged. Take for example

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the proposition above referred to of establishing a class of "Sawing". Suppose that in working out such a class it is found that only a part of the patents for sawing wood, metal and stone were so related that it would be advisable to bring them together, that in each of the three groups some of the machines were so peculiar to the material upon which they operated and so related to the other machines in that class that it was perfectly clear nothing would be gained by such grouping. When this condition arises there are sure to be some machines that have features in common with both groups. Having only one system we would probably spend more time analyzing and considering the uncertain ones than we would in providing for all the patents in both the other groups. If the two systems existed there would be no need to hesitate over these points for inasmuch as no patents were being withdrawn from the "particular material" classes, all those patents could be placed in the sawing class that would be useful there, regardless of how peculiarly adapted they might be to the other group. This difficulty in deciding which way to throw the doubtful patents is the greatest time consumer of our present efforts. Furthermore, no matter how much time might be devoted to settling these troublesome problems individual judgments vary so much that there is no certainty but that one person after reading a definition would decide that a particular patent was peculiar to an industry while another would conclude that it was not so limited and should fall in the broader group.

There is still another reason for establishing an industrial art system of a very different nature from those above mentioned. In a democracy the people will not support institutions indefinitely which do not meet with their approval, and it is becoming evident that the time has arrived when the public does not approve of our system of classification. The attorneys are discontented and they pass this discontent on to their clients. When they overlook references it has become the custom to throw the blame on the scheme of classification, rather than on the backward condition of the work. This practice has become so common that it is feared that many give little thought as to how many errors they charge against the office of which it is entirely innocent. It makes little difference, however, where the blame lies, it is a matter

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of what the public believes. The people who come in contact with the office should feel reasonably satisfied that it is being conducted on proper lines. It is not suggested that the establishment of an industrial art system alone would put the office on good terms with the public, for the public is represented by the validity searcher as well as by the preliminary searcher and the industrial system will never satisfy the former. It is believed, however, that without this industrial arrangement no matter how much the office may be improved from an inside point of view the public will never appreciate it or obtain from it even approximately the total service of which its resources are capable.

Of course this undertaking would cost something. More room and more force would be needed for its execution. One thing in its favor is that the cost of preparation could perhaps be much reduced by carrying it on simultaneously with the system at which the office is now engaged. In many instances as above pointed out a patent could be classified in two places quicker than it could be in one. In fact in almost every case, once the patent is read, it would require little more time to mark it for two systems instead of for one.

This matter has been presented as something needed by the Patent Office. But there is another viewpoint which certainly should not be overlooked. It is understood that the establishment of an institution having to do with the history of science is under preliminary consideration. If this should become a reality and should include, as contemplated, applied science and engineering, it is evident that an industrial arrangement of patents would be an indispensable part of that institution.

This paper has been intentiontally limited to outlines, The office, however, has a force of classifiers who have been studying for years the problem involved, from almost every angle, and if desired they would doubtless supply details in abundance.

In closing it is desired to again emphasize the fact that classification for office purposes differs in many ways from those in which the public at large may desire to employ it. The primary function of the office is to grant *valid patents.* These patents are intended to be a benefit to the public, but if they are not valid they will surely be a detriment instead.

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SECRECY OF WAR INVENTION.

By William D. Shoemaker.

On October 6, 1917, were passed two enactments of Congress relating to the secrecy of inventions. One was a special law known as Public No. 80, conferring upon the Commissioner of Patents power to order secrecy of certain inventions and to withhold the patents therefor (see vol. 243, O. G. p. 797). The second was section 10(i) of the Trading with the Enemy Act.

These two enactments differ on this subject but slightly, and evidently have the same object in view. It is the writer's opinion that the passage of both acts instead of one was an oversight upon the part of the legislature due to the rush of the closing hours of the session.

Under the Executive Order of October 12, 1917, the President vested in the Federal Trade Commission the power and authority (conferred upon him in section 10(i) of the Trading with the Enemy Act), whenever in its opinion the publication of an invention or the granting of a patent may be detrimental to the public safety or defense or may assist the enemy, or endanger the successful prosecution of the war, to order that the invention be kept secret and the grant of letters patent withheld until the end of the war.

A study of the two enactments and the Executive Order shows that there are two branches of the Government qualified to order that an invention be held secret and two branches of the Government qualified to withhold the grant of letters patent upon that invention.

The only penalty provided for a violation of an order issued under Public 80 is the abandonment of the invention, whereas section 10(i) of the Trading with the Enemy Act provides for the abandonment of the invention in the same manner but in addition there is the general penalty of the act, which is a fine of not more than Ten Thousand Dollars ($10,000) or imprisonment of not more than ten (10) years, or both.

It is obvious, therefore, that the first problem presented was the evolving of some plan of coöperation between

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the Patent Office and the Federal Trade Commission, whereby the two enactments might be enforced without any real or apparent inconsistencies in the actions taken by different branches of the Government in the matter of ordering secrecy of invention. It is to the credit of the officials of both of these branches of the Government that such plan was finally evolved.

At the Patent Office, a committee of primary examiners was appointed, consisting of Messrs. Smith (Chairman), Skinner, Colwell, Glasscock, Holt, Rich and Lewers, to whom the members of the examining corps of the Patent Office were directed to report applications for patents involving war inventions as they are filed or as they come up for action. This committee passes upon the question of whether an order of secrecy should be issued in the application and the patent withheld thereon.

There was also organized an Army and Navy Patent Board, whose duty, among others, is to peruse the applications pending in the Patent Office to see if certain of them should not be called to the attention of the proper military authorities. This board has been asked to act as a representative of the Federal Trade Commission in the matter of securing secrecy of war inventions, and often calls the attention of the Committee of Primary Examiners to applications in which it would appear desirable to have orders of secrecy issued and the patents withheld.

This board has also been given the work of furnishing all branches of the Army and Navy with copies of patents and prints and any other documents in the Patent Office which may be desired, and also has access to all pending applications.

The work of perusing all pending patent applications is considerable, and it is understood that reliance is placed largely upon the coöperation of the individual members of the examining corps to call attention to important cases. It was to be expected that some applications which should have been withheld have been overlooked entirely, or only discovered after some delay, affording time and opportunity for disclosures to be made prior to the issuance of secrecy orders therein. By and large, however, there has been satisfactory coöperation

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between the Committee of Primary Examiners, the Army and Navy Patent Board and the members of the examining corps.

In certain lines of invention practically all applications are withheld from patent; in other lines a large percentage of the cases are selected from among many on file, while in still other lines an occasional application is withheld. The importance of inventions for military purposes is a matter in which good judgment is required. For instance, an application for a patent covering detail construction of a gun or its mount which is at present in use by the Army might not be withheld from issue, because a number of such guns and mounts had fallen into the hands of the enemy upon the battlefield; whereas an application for a patent covering a new process for manufacturing a cloth for uniforms designed for the protection of the soldier from gas attack, might be withheld.

Upon the recommendation of the Committee of Primary Examiners, or upon the suggestion of the Army and Navy Patent Board, or upon his own initiative, the Commissioner of Patents issues an order of secrecy and withholds the application from patent under Public 80. Once a week the Commissioner furnishes the Federal Trade Commission with a schedule of the cases in which orders of secrecy have been issued by him, whereupon an order is issued under the Trading with the Enemy Act by the Federal Trade Commission in these cases. Certified copies of this order are served upon all parties appearing as inventors, attorneys or assignees upon the schedule, except those residing abroad.

It is to be noted that the order issued by the Federal Trade Commission merely forbids the disclosure of the invention; that is, it enjoins the secrecy of invention only, without withholding the issuing of the patent, since the order of the Commissioner is sufficient for that purpose.

From time to time the Federal Trade Commission has issued special orders in the cases of individual inventions, where the circumstances are exceptional and where the effectiveness of the order depends upon the prompt imposing of the penalty of the Trading with the Enemy Act, as where the War or Navy Department has request-

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ed the issuance of the order, or where the parties sought to be enjoined are not the inventors, assignees or attorneys.

It is to be noted that the order issued by the Federal Trade Commission is general in its form, and is not limited to parties interested in the invention, but applies to all who may have knowledge thereof. Actual knowledge, therefore, of the issuance of an order of secrecy in any given case, is sufficient to bind all who have knowledge of the invention.

By the terms of the Federal Trade Commission's order no party is enjoined from disclosing an invention to the Secretary of War or the Secretary of the Navy, or to such other persons as they may officially designate in writing. By the terms of the Federal Trade Commission's order a permit to disclose issued by the Commissioner of Patents is recognized as a modification of the order issued under the Trading with the Enemy Act, and a rescinding by the Commissioner of Patents of his order is effective as a rescinding of the order of the Federal Trade Commission.

It is not the intention of orders of secrecy of invention to prevent or hinder the exploitation of inventions which may be of use to the United States or its allies in the war, and modification thereof is made whenever it becomes necessary to accomplish that result.

Permits to disclose enjoined inventions are issued by the Commissioner of Patents, in his discretion, where applicants apply therefor setting forth the names of the parties to whom disclosure is to be made and a valid object in making it.

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A PROPOSED DEPARTMENT OF INVENTION AND DISCOVERY.

By James H. Lightfoot, Examiner.

[This paper presents a development from the matter involving fundamental principles as treated in papers read before the examining corps September 28, 1916, and before the junior examiners February 7, 1918, and is intended to define a program or system by which those principles may be put into practical effect and without which the requirements of the constitutional provision may not be fairly complied with.]

If we as individuals and as a nation are to be industrially and economically prepared and efficient to meet the necessities of war as well as to compete for industrial supremacy in times of peace, it is essential that our condition of industrial progress and preparedness be based upon certain and secure foundations.

There can be no healthful growth or substantial permanency in our national or private industries if they be founded upon unsettled, insecure, or defective rights.

The problems involved in making America industrially sound, efficient and prepared are real, serious and most highly controlling. These problems cannot be solved except by the active application of fundamentally right principles of industrial progress, security and efficiency.

During the past four years or more there have been sufficient evidences of the need and value of systems of industrial, economic and military preparedness and efficiency, and there have been sufficient evidences of disaster due to the want of such systems to convince even the most pronounced reactionary of the urgent need of a highly organized and efficient industrial system.

Since it is right and essential in a most important sense that the inventive genius and forces of the nation have been marshaled, encouraged, fostered and systemized to win the war for freedom and for real civilization, it must be equally important and right that the inventive forces of the nation be encouraged, fostered, and made secure

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as to their rights, in order that we may win the industrial contest that will follow the termination of the present war.

Our President has said that "The world must be made safe for democracy". However, in order that this desired object may be attained and permanently maintained, it is essential that industrial rights be made safe and secure and that those men of original thought and action who have orginated all the devices that have made and will make victory possible in war and industrial supremacy possible in times of peace, be encouraged and given due and certain reward for their important achievements.

In other words it is essential that the patent system be *made safe for inventors,* and for all manufacturing and business interests based upon invented things.

With true prophetic vision the framers of our Constitution have directed and constructed the safest and soundest foundation for the most efficient system of industrial progress and security. The words of the Constitution: "Congress shall have power to *promote* the *progress* of *science* and the *useful* arts by *securing* for a limited time to inventors * * the *exclusive* rights to their * * discoveries", constitute the source of inspiration and the vital fundamental authority for the origination and establishment of all of our national, corporate and private industries upon firm and secure foundations, and it is essential to the proper promotion of industrial progress and stable, safe and sound business conditions that the terms of this constutional provision be fully and strictly complied with in our laws and in our practices.

However, although the Patent System has been established for more than one hundred years, and although our nation has prospered and progressed industrially under its provisions, inventors have not been made secure and exclusive in their rights in such full measure as the Constitution directs.

And, notwithstanding the fact that there have been gradual improvements during the past century in some respects, although there have been some laudable reforms in recent years, and although able Commissioners

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of Patents have endeavored to produce needed reforms under discouraging circumstances, the following conditions requiring remedial action still exist:

(1) All patents granted are still merely *prima facie* evidence of the rights of inventors to their inventions, whereas the grant itself and the Constitution provide for the grant of unconditional, secure and exclusive rights.

(2) Although the statute (4886) requires, *as a condition precedent to the grant,* that the alleged invention sought to be patented must have been in fact *invented,* patents have been granted and are still granted for things *not invented,* because of insufficient time and inadequate facilities for the proper consideration of this important question, and patents have been and are still refused because of the want of a proper system requiring the presentation of *practical* evidences indicating *invention,* for the consideration of the examiner.

(3) Although the statute (4886) requires, *as a condition precedent to the grant,* that the alleged invention sought to be patented must be *new,* patents have been granted and are still granted for things *not new,* because of the want of proper facilities and sufficient time for full and fair searches in domestic and foreign patents and publications.

(4) Although the statute (4886) requires *as a condition precedent to the grant,* that the subject matter sought to be patented must be *useful* and under Statute 4893 that it must be "*sufficiently* useful *and important*", patents are still granted for theoretical and sometimes practically useless alleged inventions, which have later constituted bars to the grant of patents to inventors of real inventions that would have practically promoted the industrial arts, this condition being due to the fact that no facilities have been afforded for properly determining the question of utility or practicability so essential to the practical promotion of industrial progress.

(5) Although the statute (4886) requires as conditions precedent to the grant, (a) that the alleged invention must not have been known or used by others in this country before the applicant's invention or discovery thereof; (b) that the alleged invention must not have been *in public use or on sale* in this country for more

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than two years prior to the application; (c) and that the alleged invention *must not have become abandoned,* patents generally have been granted without any investigation of these important questions affecting validity, because no system for the general investigation of these questions before the patent is granted has ever been provided.

(6) Although Rev. Stat. 4903 plainly requires that helpful "information" be furnished to applicants to aid them in obtaining proper protection, patents are still granted the claims of which are so limited in scope as to be valueless to the inventor or his assignee owing to the want of a uniform standardized system of examining applications from the standpoint of the inventor as well as from the standpoint of the public.

(7) Although the provisions of Rev. Stat. 4904 are broad, comprehensive and directory in providing for *notice in all cases* of *interfering applications* or *interfering applications and patents,* patents are still granted which are rendered practically valueless and the industries based therein practically ruined by the subsequent grant of interfering patents granted on copending applications of which the former patentees had no statutory notice during the copendency of such applications.

(8) And patents are still litigated in courts which, with some few able exceptions, are not specially qualified promptly and properly to determine the technical questions arising under the patent laws.

These unfortunate actualities which have produced unsettled, unsafe and unsound business conditions would doubtless largely have been remedied had the people generally been educated as to the true importance and real meaning of the Patent System; had inventors and manufacturers realized that it is essential to their own safe and secure interests that patent applications be examined from the standpoint of inventors as well as from the standpoint of the public, in a spirit of helpful coöperation with inventors and attorneys; and had the Congress realized its constitutional responsibilities in providing men, means and all facilities for the proper, thorough and full consideration of all pending cases in the Patent Office and for the proper adjudication of all patent cases in the courts.

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The business interests of the nation in general, the interests of the manufacturer, the capitalist, the investing public and the highest interest of inventors who have originated and made all of our industries possible, all demand that reforms in the above-named particulars and others be effectively made in order that the foundations of industrial enterprise may be made safe, secure and free from the complexities and uncertainties of long litigation in the courts and of long prosecution in the Patent Office.

A system that may, if made uniform, remedy some at least of the defects noted above so far as the consideration of alleged inventions by the Patent Office is concerned, it is thought, should include the mature and thorough analysis and examination of the subject matter presented in patent applications both from the standpoint of inventors and from the standpoint of the public in a spirit of helpful coöperation with inventors and attorneys and with full consideration of the educational, contractual and constitutional characters of the patent grant. An attempt has been made to treat this kind of examination and analysis of patent applications in a paper read before the corps of examiners on September 28, 1916, and, in a more elementary way in a paper read before the junior examiners on February 7, 1918.

It is obvious that full, fair and complete examinations of "alleged inventions" as required by statutory and constitutional provisions as above noted, may not be made by the present inadequate force of examiners, with inadequate time and inadequate facilities and equipment for such essential work.

However, if full and complete provision in men, in equipment and in all facilities were made so as to enable the examiners to carry into practical effect the plain terms of the Constitution and of the statutes as noted above, in the examination of alleged inventions in patent applications, it is submitted that there still would remain much more that should be done, beyond the scope of the examiners' work, in relation to a broader field, clearly within the plain broad terms of the constitutional provision for promoting industrial progress by making inventors secure in their *inchoate rights* before application

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is filed as well as in their rights after the patent is granted.

In order to indicate comparatively the character of such a system that should be established, in order to more fully comply with constitutional and statutory requirements, attention is called to the remarkable system of promoting the progress and efficiency of the agricultural arts that has been effected by the Department of Agriculture alone and by this Department in coöperation with State Agricultural Colleges.

A few years ago, comparatively, the Department of Agriculture was a minor section of the Patent Office, the principal function of which was to issue seed to farmers. Afterwards, in 1862, under Commissioner Isaac Newton, this agricultural section became an independent bureau, and in 1889 under Commissioner Coleman, it became an executive department of the highest rank with Cabinet representation. Today it stands as our most useful Industrial Department, with normally about fifteen thousand employees engaged in promoting one general line of industry, while the Patent Office is provided with only about four hundred examiners who are charged with the constitutional duty of promoting *all lines of industry*, by making inventors secure and exclusive in their rights.

The Section Chiefs, the Bureau Commissioners and the Secretaries of Agriculture and their associates in work, with clear conceptions of the great possiblities of promoting sound scientific agricultural development, have established an active system of promoting the progress of the agricultural industry by educating the farmer and farmer's boy, through bulletins and by personal instruction and demonstration in every detail of agricultural knowledge essential to efficiency and success, so that today American farmers thus educated and organized constitute the backbone and the body of a standardized system that is furnishing food to all our allies and to neutrals and abundantly supplies our home markets.

This department has established a Bureau of Soils to teach the farmer how to prepare the soil to produce better crops and how to cure soil defects and insufficiencies.

They have established a Bureau of Plant Industry to

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investigate and teach seed selection, crop selection, better crop production, cultivation and utilization.

They have established a Bureau of Entomology to carry into effect measures to eliminate loss of crops due to the enemies of plant life and growth.

They have established a Bureau of Chemistry to determine the food values of vegetable growths and to determine the producing values of soil and fertilization needs for the same.

They have established in many localities Government Experiment Stations and an efficient corps of field agents in practically every county in the country who take the spirit of progress and efficiency of the departmental system directly to the farmers, and, knowing full well that the efficient farmers of the future are best made by instructing the farmers' boys of today, they have established modernized systems for teaching and encouraging the work of the boys on the farm.

They have established a Bureau of Markets and Rural Organizations to teach the farmer the best marketing methods for the products of his farm, for his protection and to prevent loss and failure to acquire a proper return for his productive labor and skill.

These are some only of the many up-to-date activities of this most wonderfully systematized institution, yet great and wonderful as it has grown to be there would probably have been little of agricultural progress and development and little need of an Agricultural Department were it not for the thousand and one agricultural implements, machines, processes, fertilizing agents, the means of transportation for crops and the great factories, mills and plants for the treatment and production of agricultural products, that have been produced by inventors under the Patent System and through the medium of the Patent Bureau.

Not only would there be little need for an Agricultural Department were it not for the fact that inventors have made modern agriculture possible, but it is also true that there would be little need of a War Department were it not for all of the engines and devices for war originated by inventors under the encouragement and inducements offered by the Patent System, and there would likewise be little need of a Navy Department without the ironclad,

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the submarine, and the wireless, produced under the encouragement of the Patent System by inventors and discoverers.

The Department of Commerce and the Post Office Department would be minor institutions without invented means of transportation and transmission of intelligence, and the Department of Labor would probably never have been established were it not for the fact that invented machines, new arts, new industries, new implements of labor, have lifted labor from its low dependent state to the plane of the intelligent, skilled workman constituting a material factor in our industrial growth and life.

Yet, notwithstanding the fact that the Patent System, the Patent Office, the inventor, have made possible not only practically every governmental industry and activity, but also every individual and corporate industrial enterprise, the people generally have been kept in ignorance of the true meaning and wise provisions of the Patent System, and the functions of the Patent Office, its real importance and its urgent needs are little known and still less appreciated.

It is maintained that to constitute a fairly full compliance with the constitutional requirements, and in order that it may fairly measure up to the extent and importance of its constitutional foundation, the Patent Bureau should develop into an executive department of the highest grade and through its bureaus and divisions should direct, encourage, foster and protect inventions and discoveries in all of the industrial arts, just as the Agricultural Section or Bureau of the Patent Office has developed into the Department of Agriculture and has directed, encouraged, fostered and protected new and improved means and processes of promoting the progress of the agricultural arts and industries.

This greater and better institution should be our most important national industrial department because its work would furnish the foundations for and would promote the activities of all other departments.

If the plain broad terms of the constitutional provision are to be practically applied in the activities of this new industrial department, it may be that its field of work should be systematized somewhat as follows:

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1. An Executive Bureau.

This new department should be under the control of an executive officer of distinct ability, free from political bias, who should be an industrial and efficiency expert. Directly and through competent associates, this official should maintain systems of efficiency and standardization in the various bureaus in keeping with this greater program for promoting industrial progress and stability. Under the direct control of this Secretary of the Department of Invention and Discovery a system should be established for the promotion of a high standard of efficiency and ethical standing among practitioners and a spirit of progressive and constructive efficiency among officials of all classes in his department.

2. The Bureau of Information and Education.

This bureau should be equipped with men and full facilities for promoting the dissemination of knowledge of the true meaning and provisions of the Patent System.

Specially is this essential because in its most fundamental sense the Patent System is an industrial educational system and it constitutes one of our most glaring national errors that the public in whose interests the Patent System was established has been kept in ignorance of its true meaning and intent.

This Educational Bureau should be charged with the duty of establishing a system to instruct the inventing public as to how to prepare to make inventions, how to invent in the interest of the public, and with profit to themselves, what to invent, how to avoid losses through abandonment or want of knowledge as to how to proceed after conception or reduction to practice to avoid complications, how to obtain patents of value, how to study the prior arts before inventing, how to select competent attorneys, in fact everything connected with making and patenting and marketing inventions just as the Department of Agriculture has, through bulletins, publications and field agents, instructed the farmer in all respects how to prepare to produce crops, how to produce them, how to protect and conserve them when produced and how to market them in the most efficient way.

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The incalculable values in time, money and energy that have been wasted in inventing useless things, in reinventing things that have been shown to be old, and the great values in inventions lost to the nation because the inventors have not known how properly to develop them to material form and how to have them properly disclosed and protected in letters patent, clearly indicate the great need of educational work along these lines.

The workmen in the shops and factories, in the laboratories and on the farms know little if anything of their rights or responsibilities in relation to invention, and manufacturers and their employees know little in relation to the same.

This condition has resulted in the grant of many patents to employers for inventions made by employees and has resulted in granting some patents to employees that have been made by employers, all of which patents being thus rendered invalid, have produced complex business conditions.

If it be true, as has been stated, that unscrupulous industrial institutions have pirated inventions in various stages of their development and that an enemy propaganda has been extended even to pirating inventions in the making and before being patented, it is clear that inventors should be taught to protect their inventions in the making and when completed from these enemies and from others who would pirate them.

And if the spirit of inventions is to be encouraged, fostered and promoted in the national interests, it is quite obvious that this Educational Bureau should seek to promote the instruction and study in our educational institutions of the philosophy of invention and the true meaning and importance of the Patent System.

Included in this Educational Bureau may be a corps of Patent Field Agents, just as there are Agricultural, Land and Pension Field Agents, who in coöperation with inventors, attorneys, manufacturers and capitalists, should seek to aid, in every possible way, the interests of inventors and manufacturers, because in this way the public interests will best be subserved.

The Division of Information of this bureau should be a well organized institution of well qualified experts who

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should furnish full and accurate information to solicitors, inventors and industrial institutions, as to fields of validity search, and as to all matters in relation to procedure and practices involved in the activities of the department.

3. Bureau of Patents and Publications.

This institution should have an able staff of men to establish and maintain an efficient classification of patents and an efficient classified library of all statutory publications relating to the industrial arts. This staff of specialists should properly digest publications for quick and thorough search purposes. It should by a regular standardized system seek to procure industrial literature from manufacturers and from all other sources and should classify and systematize them for ready research purposes. This bureau should also coöperate with Patent Field Agents to procure evidence of prior knowledge and use, prior public use, and workshop and laboratory expedients and practices, and classify them for ready reference by the examiners. Under the jurisdiction of this bureau there should be established in given industrial centers, complete classified sets of patents and publications, just as they should be classified and arranged in the Patent Office for official research work, it being obvious that the present system of requiring men from all parts of the country to make searches in one set of such patents located in Washington is distinctly inefficient and antiquated.

4. A Bureau or Division of Utility.

This bureau should be equipped with laboratories, and all necessary equipment and competent workmen who will coöperate with the examiners in accurately determining, before patents are granted, the practibalitiy and operativeness of alleged inventions under consideration. It is submitted that it is contrary to public interests and to the interests of real inventors and of manufacturers, that patents be granted upon merely theoretical ideas and practically useless alleged inventions which may technically constitute bars or improper limitations upon the grant of patents for later inventions of real merit, which being reduced to practical and efficient form would materially promote industrial progress.

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5. A Bureau of Validity Examinations.

This bureau should be fully equipped with well qualified men, including an additional grade of re-examiners to re-examine claims held allowable by other assistant examiners, this new grade ranking between the first assistant and principal examiner.

The work of this corps of specialists should be so systematized and arranged that each should have full time and facilities to examine the subject-matter of each application under his consideration thoroughly, from the standpoint of the inventor as well as from the standpoint of the public, so that when granted patents may afford inventors full protection and be essentially valid, thus constituting a safe and sound basis for the establishment of industries and safe and secure investments for the capitalists who may promote the establishment thereof.

6. A Bureau of Priority of Invention.

The present divisions of interference should be expanded into a Bureau of Priority for the full, complete and final determination of the question of priority between copending applications or applications and patents containing common patentable subject-matter. It is essential to the establishment of safe and secure rights that the question of priority be promptly, thoroughly and finally determined within the bureau, and that this question be not extended through various appeals in the Patent Office and then further and indefinitely extended through various appeals in the courts. With a competent and efficient Bureau of Priority the questions at issue may be fairly and finally determined by judicial officers within the bureau, it being a matter of much importance that the patents when granted be free from further interference complication if they are to constitute bases for the establishment of industries, or if they be importantly involved in an industry already established.

The injury to established industry and the discouragement to inventors, manufacturers and investors due to the subsequent grant of patents that dominate or invalidate patents formerly granted on copending interfering applications without notice, have created a condition so

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obviously violative of the grant of *secure and exclusive* rights that distinct reforms should be effected. As it is essential to a safe and sound industrial system that patents be granted that are essentially valid in view of the prior published arts, so also it is equally if not more essential to such safe and sound industrial system that patents, when granted, be free from further interference by domination or invalidization by copending later granted patents of which the former patentees had no notice while their cases were pending.

While being properly equipped with qualified men to properly determine the question of priority, this bureau should also include men who may sit as commissioners to take testimony and determine the admissibility thereof, so that when the testimony reaches the tribunal to determine priority, only the proper legal evidence may be considered.

In order that the question of priority may be finally determined within this bureau, there should be a Board of Interference Appeals consisting of specially qualified men who may properly hear and finally decide appeals from the decision of the examiners of interference. This appellate board of specially qualified men would be more apt to render fair and just final decisions than would tribunals that are not thus specially qualified.

7. This greater and broader Department of Invention and Discovery may possibly also include a Bureau of Licenses and Sales, just as the Department of Agriculture has a Bureau of Markets.

Such a bureau as this may be found useful in preventing impositions and frauds upon inventors by unscrupulous profiteers; in bringing the buyer and seller together in a way that would be for the best interests of the inventor and the capitalist; and in general by advising inventors and patentees how they may properly market their inventions if they be of marketable value. It is a well known fact that it has been too often the case that inventors who have produced by their own ingenuity new forms of property value to the public have derived little or no benefit from their important work, and a properly conducted division or bureau of the character named may in due time work out some scheme by which the inventor

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may be assured of a just reward for the benefits he confers upon the public.

8. And, as has been suggested by a very able patent lawyer representing important industrial interests, this greater industrial department should include among its activities, a competent Patents Court of specially qualified jurist, to promptly and finally determine the questions of validity and infringement.

The foregoing is a mere cursory and inadequate presentation of a very important subject and it is hoped that others abler and more capable may appreciate the importance of properly presenting this matter in a way that may result in inaugurating an effective movement to establish a safe and sound industrial system under the constitutional provision to which attention has been invited.

It is appreciated that there is no instantaneous process by which a bureau with fixed practices of long standing can be enlarged or converted into an executive department for greater and larger lines of work, but it is believed that just as some able men encouraged and supported by the agricultural interests have in due time converted the small "section" of the Patent Bureau into the great Department of Agriculture, just so other able men, with clear conceptions of industrial needs, if encouraged and supported by all industrial interests affected by the Patent System, may in due time convert the Patent Office into a Department of Invention and Discovery, with full powers for promoting the progress of science and the useful arts under the Constitution in the interest of national and individual industrial efficiency and preparedness, and to promote and establish a safe and sound industrial system based upon secure and exclusive rights in letters patent.

Should a program or system such as that referred to herein be put into practical effect the following results would doubtless accrue therefrom:

1. The patent system would be popularized among the people just as the work of the Department of Agriculture has become popularized, and it would be made constructively efficient.

2. The Patent System having been popularized and

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the people generally having been educated as to the true meaning and importance thereof, there would of necessity be a greater and more general development and exercise of the inventive faculty and the power of original thought in the public and individual interests.

3. Inventors would be encouraged more actively to promote the progress of the useful arts by the production of new and useful things, knowing as they would that they would be better protected and made more secure in their rights.

4. Manufacturers would feel more assured that their plants were established upon more secure and safe foundations and they would be encouraged more actively to engage in constructive industrial business.

5. The capitalist and the promoter knowing that industrial rights under letters patents were made more safe and secure, would more freely and actively invest in and encourage the establishment of manufacturing and industrial enterprises.

6. Necessarily with this industrial growth and this increased activity of inventors, manufacturers and capitalists due to the promotion of safe and secure rights, the professional business and legitimate services of ethical attorneys and solicitors, whose able work for inventors and manufacturers has been a large contributing factor in our industrial growth, would be correspondingly increased and made of more importance and value.

7. And more important still, the industrial interests of the nation, its governmental interests, individual interests, general professional interests, corporation interests, all material interests and other interests dependent thereupon, would be vitalized and put in a safe, progressive, secure condition.

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PARTIES IN GENERAL.

By Chas. E. Tullar, Examiner.

(Delivered before the fourth assistant examiners.)

Before taking up the particular situations arising under Rules 25, 26 and 28, a brief consideration of the question who may obtain a patent is in order. The questions as to who may make the application and swear to the specification will be taken up in detail under the rules referred to. The question as to who may be the grantee of a patent will be taken up in connection with the subject of assignments under Rules 26 and 183 to 189, inclusive.

Section 4886 upon which Rule 24 is based extends the right to obtain a patent to *any person* who has *made an invention* within certain subjects matter of invention provided certain conditions are fulfilled and certain requirements complied with.

In the United States a valid patent can be obtained when it is based upon the right of an *original inventor* only. Such inventor need not be the first to make the invention although at the time of making application he must be able to make oath that he believes himself to be the original and first inventor. (Sections 4892 and 4923, Revised Statutes.) It is only where there are rival claimants for the same invention that the question of priority of invention arises and when it arises it is determined by an interference proceeding under Section 4904, Revised Statutes. (Rules 93 to 132, inclusive.) Even where it has been clearly established in an interference proceeding that one party is not the first inventor, he may under the patent law receive a valid patent for his invention as is shown by the case of De Ferranti v. Lindmark, 134 O. G., 515; 1908 C. D., 353, 30 App. D. C., 417, where De Ferranti obtained priority over Lindmark although Lindmark's foreign and domestic filing dates, respectively, anticipated the foreign and domestic filing dates of De Ferranti. This resulted from the fact that the Act of March 3, 1903, gave De Ferranti the benefit of his foreign filing date, but, since it did not apply to pending applications, gave Lindmark no such benefit.

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The "person" contemplated by Section 4886 must be a natural person as distinguished from a corporation.

It has been held that the invention of a slave can not be patented by him or his master. (9 Op. Atty. Gen., 171.) Presumably this opinion was based upon the idea that a slave was a mere chattel and therefore not a "person" in contemplation of the statute.

The law gives the right to a patent to an inventor whether *sui juris* or under disability. A married woman, an infant or a person under guardianship may be an inventor or the assignee of an inventor. (Fetter v. Newhall, 25 O. G., 502; 1883 C. D., 429; 17 Fed., 841, C. C. S. D. N. Y.)

A convict serving a term in the penitentiary may apply for and receive a patent for an invention made by him.

The personality of the inventive act may reside in two or more individuals, in which case the application must be a joint application. The subjects of joint invention and joint application are treated in detail under Rule 28.

Where the inventor dies or becomes insane after completing his invention his legal representatives may make the application and receive the patent. (Section 4896, Revised Statutes.)

Aliens:

The original patent act of 1790 placed aliens on the same footing with citizens of the United States. The Act of 1793 limited the right of applying for a patent to citizens of the United States. The Act of 1800 extended the right to aliens who at the time of making application had resided for two years within the United States. The Act of 1832 gave the right to every alien who at the time of making application had declared his intention of becoming a citizen. His patent was to be absolutely void, however, if he did not become a citizen at the earliest time the law permitted. Furthermore, his patent was to be void if he did not introduce his invention into public use in the United States within a year from the granting of his patent, and also if at any time after such introduction he failed to continue such use for a period of six months.

Since the Act of 1836 the United States has by law recognized the right of a foreign inventor to a patent for his

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invention. That law discriminated against the foreign inventor in the matter of fees. The fee for a British subject was five hundred dollars, for all other foreigners three hundred dollars, while for citizens or residents of the United States the fee was thirty dollars. This discrimination was done away with by the Act of 1861. Since that date the foreign inventor has been accorded the same rights as are accorded citizens of this country.

Under the "Trading with the Enemy Act" of Oct. 6, 1917, 243 O. G., 1070, an enemy or ally of an enemy may file and prosecute applications in this country.

Government Employees Generally:

A person in the employ of the United States may apply for and receive a patent for an invention made by him during his employment. (Gill v. United States, 160 U. S., 426.) Where, however, a person is employed to devise or perfect a means to accomplish a prescribed result his invention belongs to his employer and there is no difference between the Government and any other employer in this respect. (Solomons v. United States, 137 U. S., 342.)

Under the Act of March 3, 1883, Chapter 143 (U. S. Statutes XXII, page 625) a patent may be granted to any officer of the Government except officers and employees of the Patent Office, without payment of fees, provided the applicant states in his application that the invention if patented may be used by the Government or any of its officers or employees in the prosecution of work for the Government, or by any other person in the United States, without the payment of any royalty, which stipulation shall be included in the patent. The preparation of an application under this statute is sometimes assigned to the examiner in whose class this invention would be classified.

The Act of June 25, 1910, (36 Stat., c. 423, p. 851; quoted in 1912 C. D., 637) giving the right to sue for reasonable compensation whenever the United States uses a patented invention without license from the owner, does not extend such right to any device invented by a Government employee during his term of service.

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Patent Office Employees:

Officers and employees are incapable during their employment of acquiring except by inheritance or bequest, any interest in a patent issued by the office, Sec. 480, Rev. Stat. The intent of Congress was to prevent persons from taking any undue advantage of the opportunities they have, as a result of their connection with the office. Applications filed in contravention of the statute are returned together with the filing fee. (26 O. G., 637; 1884 C. D., 12.) No steps can be taken to acquire an interest in a patent, and an application any of the parts of which are filed by an employee cannot be completed. (*Ex parte* McElroy, 80 O. G., 966; 1897 C. D., 40.) A person taking employment in the Patent Office does not forfeit or dedicate to the public any invention made by him before such employment. (Page v. Holmes Burglar Alarm Telegraph Co., 17 O. G., 737; 1880 C. D., 345; 1 Fed., 304, C. C.) If, however, he has any applications on file at the time he accepts employment, the prosecution of those applications for his interest can not continue. It is customary to assign all right, title and interest in such applications before reporting for duty.

An employee may obtain patents on his inventions, made during his employment, after he leaves the office, and any such invention may be given its true date. (Foote v. Frost et al., 14 O. G., 860; 1878 C. D., 421; 3 Ban & A. 607, Fed. Cas. No. 4910.) The disability is, however, self imposed and, in case of interference, diligence cannot commence before resignation from the office. (*Ex parte* McElroy, 140 O. G., 1207; 1909 C. D. 52.)

An applicant who is an ex-employee of the office will be regarded as having made his invention in the light of all applications pending at the time of his employment for the same reason that any applicant is conclusively presumed to know the prior art. It would be impossible to prove whether or not he did in fact see any particular application, and therefore he must be presumed to have knowledge of them all. While the examiner was directed to reject on copending applications in *ex parte* McElroy, 80 O. G., 1123, it would nevertheless appear that such procedure presents difficulties since the applicant cannot well be permitted access to pending applications to deter-

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mine whether or not such rejections are well founded. When attacking the validity of a patent granted to an ex-employee of the office for an invention made during his employment it would seem that patents granted on prior copending applications might be pleaded under the third, rather than the fourth, defense set forth in Sec. 4920 Rev. Stats.

There is another aspect of the situation which must not be overlooked, and that is that an applicant has a right to keep his invention secret, under the present rules, until his patent issues. This right should not be violated by an employee of the office. If, however, an examiner makes an improvement on a pioneer invention disclosed only in a pending application it will probably be impossible to obtain a patent on the improvement without disclosing the subject matter of the pending application to the public. It will therefore be seen that an ex-examiner who makes application for improvements on devices of which he has obtained confidential information through his employment must exercise the very highest type of good faith, if necessary jeopardizing his own rights, to safeguard the rights of others.

DECISION OF THE SOLICITOR FOR THE DEPARTMENT OF THE INTERIOR.

Under date of September 20, 1918, the Solicitor for the Department of the Interior rendered a decision on the question as to whether "persons who have entered and are actually engaged in the military or naval service of the United States, whether as officials or privates, are ineligible to practice as attorneys representing applicants for patent before the Patent Office".

The decision, based on Sec. 113 of the Penal Code, Act of March 4, 1909 (35 Stat., 1088-1109), holds that commissioned officers of the Army and Navy can not receive or agree to receive compensation for acting as such attorney, but may so act without compensation. An enlisted man may act as such attorney and receive compensation.

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RULES 25, 26 AND 27.

By Chas. E. Tullar, Examiner.

(Delivered before the fourth assistant examiners.)

Rule 25.

25. In case of the death of the inventor, the application will be made by and patent will issue to his executor or administrator.[1] In that case the oath required by Rule 46 will be made by the executor or administrator.[2] In case of the death of the inventor during the time intervening between the filing of his application and the granting of a patent thereon, the letters patent will issue to the executor or administrator upon proper intervention by him.[3] The executor or administrator duly authorized under the law of any foreign country to administer upon the estate of the deceased inventor shall, in case the said inventor was not domiciled in the United States at the time of his death, have the right to apply for and obtain the patent. The authority of such foreign executor or administrator shall be proved by certificate of a diplomatic or consular officer of the United States.[4]

In case an inventor become insane, the application may be made by and the patent issued to his legally appointed guardian, conservator, or representative, who will make the oath required by Rule 46.[5]

(1) and (3) Death Occurring Before or After Filing Application.

Since the Act of April 17, 1800, the law has contained a provision permitting the personal representative of a deceased person to apply for a patent on an invention completed by the deceased before his death. The right of an inventor to a patent therefore vests in him at the moment the invention is complete and is not affected by his death. This right, like other personal property, upon the death of the inventor vests in the executor or administrator of the estate. If the inventor has assigned the invention the beneficial interest is in the assignee.

Section 4896 of the Revised Statues provides for two classes of cases, one in which the application is filed before, and the other in which it is filed after the death of the inventor. In the first case only the right of obtaining the patent devolves upon the personal representative, while in the latter case the right of both applying for and obtaining the patent so devolves. In the former case the

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filing of a new application is not good practice, but is not illegal. (*Ex parte* Smith, 43 O. G., 505; 1888 C. D., 24; De La Vergne Machine Co. v. Featherstone, 62 O. G., 741; 1893 C. D., 181; 147 U. S., 209.) Such new application will not be permitted, however, to impair, the rights of assignees and parties to an interference. (Rice v. Burt et al., 16 O. G., 1879; 1879 C. D., 291.)

An application is a legally pending application until the time for action expires, although the inventor is dead and the executor has not asserted his rights. (Decker v. Loosley, 77 O. G., 2140; 1896 C. D., 106; Handly v. Bradley, 89 O. G., 522; 1899 C. D., 197.)

An assignee of an inventor who died before making his application can not file an application even where the subject matter is divided out of an application filed by the inventor. (*Ex parte* Stevens, 59 O. G., 299; 1892 C. D., 1887.)

Where after signing the petition, specification, and oath and delivering them to the attorney for filing the inventor dies before the papers are deposited in the Patent Office, it is not necessary for the personal representative to prepare new papers to constitute the application. (*Ex parte* Jones, 103 O. G., 228; 1903 C. D., 81.

The practice governing the prosecution of applications by legal representatives of deceased or insane persons is set forth in Order 1838, Jan. 13, 1910; 151 O. G., 453, as modified in Order 2076, Oct. 14, 1913; 195 O. G., 543.

Under these orders applications which are filed by the personal representative of a deceased or insane person or in which such personal representative has intervened, as well as those in which the death of the inventor has been suggested, shall be referred to the Assignment Division to ascertain whether proper authority is of record, and for suitable indorsement on the file.

To secure uniform practice and relieve examiners of work foreign to their usual duties, Order 1838 makes the Chief of the Assignment Division the judge of the sufficiency of the proof of authority. If this official reports that the authority is insufficient the examiner will require the recording in the Assignment Division of a certificate from a competent court or a certificate of the Register of Wills that the legal representative has been appointed

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and that his appointment is in full force and effect, or, alternatively, the recording of a certified copy of letters of administration.

Whenever a personal representative intervenes in the prosecution of an application a new power of attorney should be filed and if any action has been taken by the deceased inventor's attorney there should be a ratification of such action. The orders do not, however, provide for the giving of legal notice to the executor or administrator in *ex parte* cases. Hence the examiner can merely suggest to the attorney of record that he should secure a ratification of his acts and file a new power of attorney. If, however, the executor or administrator does not intervene and the inventor's attorney continues to prosecute the application the application will not be withheld from issue. (Order 2076.)

The reason for the modification of the practice in regard to the withholding from issue is probably that a patent granted to a dead man is not invalid for want of a grantee where it is granted under the terms of Section 4884, Revised Statutes, to the "patentee, his heirs or assigns". (De La Vergne Machine Co. v. Featherstone, *supra*). In that case the applicant for a patent, Boyle, filed his application on the 24th day of November, 1875, and three days afterward died. The attorneys whom he had appointed amended the specification in December following, and the patent was granted on March 21, 1876, to "James Boyle, his heirs or assigns". None of the beneficial owners of the patent repudiated the proceedings, but sold their interest for a valuable consideration. In addition to holding that the patent was not void for want of a grantee the Supreme Court held that the amendment filed by the attorneys did not render the patent void. It is noted, however, that the Court says:

> "The attorneys who have acted for Boyle continued to act under Rankin's (the administrator's) direction, and although it is not shown that their authority was conferred in writing by a power of attorney executed and filed in accordance with the rules of the office, that is not a fatal objection, since the attorneys had authority in fact, and their acts were subsequently ratified by Rankin and by Mrs. Boyle."

In the case of *in re* Mattullath, 179 O. G., 853; 1912 C. D., 490; 38 App. D. C., 497; the office had made a re-

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jection on the ground of inoperativeness, on October 1, 1902. The inventor died December 30, 1902. An amendment was filed September 18, 1903, by the attorneys of record. On September 29, 1903, the attorneys were informed that no action could be taken on the amendment because there was no one of record authorized to prosecute the case, the power of attorney having been revoked by the death of the applicant. Neither the attorneys nor the office made any attempt to notify the heirs or legal representatives of the applicant of the revocation of the power of attorney, and they were in fact ignorant of the fact of the existence of any such application. At the expiration of the year from the rejection of October 1, 1902, the case was entered in the office records as abandoned. In connection with a holding that the delay in amending was unavoidable the Court of Appeals (Shepard, C. J.) pointed out the inconsistency on the part of the office in holding that notice to the attorney was notice to the representatives, and at the same time holding that the death of the applicant had revoked the power of attorney. The court said, "Moreover, they were never the attorneys of the deceased applicant's representatives". The court said further:

> "That the power to make such an amendment had not been revoked by death, and that the action could have been taken upon it lawfully, had been declared by the Supreme Court in a decision rendered in January, 1893. (De La Vergne Machine Co. v. Featherstone, 62 O. G., 741; 1893 C. D., 181; 147 U. S., 209.) This decision ought to have been well known in the office."

Notwithstanding the De La Vergne Machine Co. decision, however, the same judge had said in Phillips v. Sensenich, 134 O. G., 1906; 1908 C. D., 391; 31 App. D. C., 159: "*Where an applicant dies pending his application the authority of his solicitor ceases* * * * ".

As a matter of fact the authorities including the Supreme Court seem to be unanimous to the effect that the death of the client revokes the power of attorney unless coupled with an interest. (Hunt v. Rousmaniere, 8 Wheaton, 174; Wylie v. Coxe, 56 U. S., 416; Cyc., Vol. 4, page 953; Am. and English Encyc. of Law, Vol. 3, page 328; *ex parte* Woodworth, 84 O. G., 811; 1898 C. D., 127; *ex parte* Jones, 103 O. G., 228; 1903 C. D. 81.) Moreover,

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the general rule of law is also that the revocation of the authority of the agent by the death of the principal applies to all acts which must be done in the name of the principal.

It would seem, therefore, that the careful attorney would endeavor to act under the authority of the executor or administrator. It is, for example, a grave question whether a ratification by mere acceptance of the beneficial interest under the patent granted to the deceased inventor can, after the time allowed by law for amendment has expired, ratify *nunc pro tunc* actions taken by the attorney after the death of the inventor but before the expiration of the time allowed by law for amendment. It was held in *ex parte* De Forest and Horton, 141 O. G., 566; 1909 C. D., 64, that a ratification may not have a retroactive effect to defeat the express provisions of the statute (Section 4894) relating to the time within which a party must prosecute an application to save it from abandonment.

In interference cases where the notices (Rule 103) have been sent to the attorneys of record and the attorney of one of the parties notifies the office of the death of the applicant, the Examiner of Interferences writes a letter in the interference to each of the parties stating that the office having been informed by the attorney of the death of the applicant the interference is suspended for ------ days to permit the intervention of the executor or administrator and further stating that if at the expiration of this period no response has been received the office will proceed by publication. The publication is for three successive weeks in the Official Gazette, the case being docketed about four days later than thirty full days after the first publication..

In *ex parte* Woodworth, 84 O. G., 811; 1898 C. D., 127, the inventor died soon after the filing of the application. A short time afterwards an interference was declared, the notices of declaration being sent to the attorney of record. The attorney notified the office of the inventor's death and at his suggestion proceedings were suspended to permit the filing of letters of administration. Such letters were filed without the knowledge of the legal representative. A decision on priority was set aside be-

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cause the death of the applicant had revoked the power of attorney and the legal representative had had no legal notice of the proceedings. This holding is in accordance with the holding of the Court of Appeals in the Mattullath case, *supra,* that the attorneys of the inventor "*were never the attorneys of the deceased applicant's representatives*". The point was directly involved in the Mattullath case since the holding of unavoidable delay was based on the fact that the representative had no notice of any application and was not put upon inquiry as to any application.

In *ex parte* Deeter, 93 O. G., 190; 1900 C. D., 162, it is held that a notice to the inventor's attorney of the allowance of an application is binding upon the administrator. This decision is clearly inconsistent with both *ex parte* Woodworth, *supra,* and the Mattullath case, *supra,* which are based upon the general rule of law.

Where after an assignment of the entire interest the inventor dies, the assignee may appoint an attorney of his own selection. There is no need for the legal representative to intervene, since the right of an assignee of the entire interest to prosecute is not confined to cases where the inventor is alive. (*Ex parte* Wick, 117 O. G., 902; 1905 C. D., 253.) While this decision might appear inconsistent with Section 4896, which provides that the right of obtaining the patent shall devolve on the legal representative, it is to be remembered that Section 4896 must be construed together with Section 4895, which provides that the patent may be granted to the assignee.

(4) Foreign Executor or Administrator.

Prior to the Act of March 3, 1903, amending Section 4896, Revised Statutes, the executor or administrator authorized under the laws of a foreign country was not permitted to file or intervene in the prosecution of an application in this country. Such representative was held to have only local jurisdiction of the assets of the deceased. Since an executor appointed in one State of the United States could not sue in the courts of another State without taking out ancillary letters there, it was held that *a fortiori* a foreign representative had no extraterritorial jurisdiction. (*Ex parte* Ransome et al., 1870 C.

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D., 143; *ex parte* Langen, 87 O. G., 697; 1899 C. D., 90.) The expense of taking out ancillary letters from some probate court in this country was considerable and in practically all cases the only estate in this country to be administered consisted of the right of applying for a patent. Moreover, owing to the Act of March 3, 1897, requiring the filing of the application in this country within a limited time after the filing of a foreign application on which a patent has been granted, the delay incident to taking out ancillary letters in this country sometimes resulted in the right to a patent being lost. These considerations led to the amendment of the statute referred to.

The certificate of a diplomatic or consular officer of the United States referred to in Section 4896, Revised Statutes, is not necessarily all of the proof required as to the authority of a foreign executor or administrator. The requirements are no less rigid in the case of a foreign representative than they are in the case of a domestic representative. (*In re* Pilgrim Paper Co., 125 O. G., 993; 1906 C. D., 464.) While this case held letters testamentary were necessary the practice has been changed by Order 1838, and at the present time any sufficient proof of authority from a source of competent jurisdiction is accepted. Indeed prior to the issuance of Order 1838 proof other than letters testamentary was held sufficient in *ex parte* Niedenfuhr, 130 O. G., 981, 1907 C. D., 257, where it was shown that the German law makes no provision for the grant of such letters.

(5) Insanity of Inventor.

Prior to the Act of February 28, 1899, amending Section 4896, Revised Statutes, the law contained no provision relative to the insanity of the inventor. An application filed by the legal representative of an insane person would not be received for examination. (Order 1204, May 20, 1898, 83 O. G., 1073.) Section 4896 as amended in 1899 places the legal representative of an insane person on the same footing with the personal representative of a deceased person.

An adjudication of insanity appears to present the same situation as the death of an applicant. It must be remembered, however, that deeds and contracts made by

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insane persons before they are adjudged insane, but within the period overreached by the finding of the jury, are not necessarily void. (*Ex parte* Wurtz, 123 O. G., 320; 1906 C. D., 241.)

The insanity of a client operates to terminate the relation of attorney and client. (Chase v. Chase, 71 N. E. 485 Ind.)

It was held in *ex parte* Hummel, 94 O. G., 583, 1901 C. D., 15, that the guardian appointed by a foreign court cannot intervene in the prosecution of an application and take out a patent for the reason that he is merely the guardian of the person and his estate within the foreign jurisdiction, his appointment having no extraterritorial effect. This we have seen is the reasoning of *ex parte* Ransome et al., *supra*. The Act of March 3, 1903, empowering foreign executors and administrators to prosecute applications does not mention foreign guardians notwithstanding the fact that the amending act was passed two years after *ex parte* Hummel, *supra*. The failure to include foreign guardians is quite obviously on oversight. It is possible that the office might permit a foreign guardian to prosecute an application if one should now be filed, especially where there was no time to take out ancillary letters of guardianship in this country, letting the applicant take his chances as to the validity of the patent. There is, however, no decision overruling *ex parte* Hummel, *supra*.

26. In case of an assignment of the whole interest in the invention, or of the whole interest in the patent to be granted, the patent will, upon request of the applicant embodied in the assignment, issue to the assignee; and if the assignee hold an undivided part interest, the patent will, upon like request, issue jointly to the inventor and the assignee; but the assignment in either case must first have been entered of record, and at a day not later than the date of the payment of the final fee (see Rule 188); and if it be dated subsequently to the execution of the application, it must give the date of execution of the application, or the date of filing, or the serial number, so that there can be no mistake as to the particular invention intended. The application and oath must be signed by the actual inventor, if alive, even if the patent is to issue to an assignee (see Rules 30, 40); if the inventor be dead, the application may be made by the executor or administrator.

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RULE 26.

Only the last clause of Rule 26 will be taken up here. The remainder of the rule will be discussed, in connection with Rules 183 to 189, inclusive, by Mr. W. B. Magruder, Chief of the Assignment Division.

Section 4888 of the Revised Statutes requires an application to be executed by the inventor, if living, before a patent can be granted in this country. In case of the death or insanity of the inventor the application can be executed by the legal representative of the inventor. The subject of such applications by such legal representatives is treated in full under Rule 25.

The patent law makes it essential to the validity of a patent that it shall be granted on the application, supported by the oath, of an original inventor, or of his legal representative, whether the patent is to be issued to him or his assignee. A patent which is applied for by one who is not the inventor is void. (Kennedy v. Hazelton, 46 O. G., 973; 1889 C. D., 349; 128 U. S., 667.)

An assignee can not file an application even where the subject matter is divided out of an application filed by the inventor. (*Ex parte* Stevens, 59 O. G., 299; 1892 C. D., 87.)

It is only to prevent the arising under Section 4887 of the Revised Statutes of a statutory bar to the grant of a patent in this country that an effort is sometimes made to file an application upon the signature and oath of parties other than the inventor.

In *ex parte* Tropenas, 90 O. G., 749; 1900 C. D., 14, it was held that application papers executed by the inventor could not be substituted for application papers executed by the attorney in fact of the applicant for the purpose of giving a date to the application early enough to avoid the statutory bar under Section 4887 of the Revised Statutes. The same holding was made in *ex parte* Sassin, 122 O. G., 2064; 1906 C. D., 205, where the power of attorney to execute the application was filed with the application papers.

In order to meet the emergency arising out of the war the Commissioner instituted the practice of accepting applications executed by the attorney, leaving to the courts the question whether properly executed applications, subsequently filed, can operate by relation back to the date

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of filing by the attorney. The practice was outlined in the Commissioner's letter of September 15, 1914, 223 O. G., 1007. It is required, however, that legally executed papers be filed before the case is passed to issue. (*Ex parte* Kramer, 238 O. G., 986.)

The last clause of Rule 26 does not apply to reissue applications, which, where the inventor is dead, may be made by an assignee and without the signature or oath of the personal representative. (Carew et al. v. Fabric Co., 1 Holmes 45; Fed. Cas. No. 2398.) The requirement of Section 4895 of the Revised Statutes, which first appeared in the act of July 8, 1870, that the reissue application be made and the specification sworn to by the inventor, applies only "if he is living".

RULE 27.

27. If it appear that the inventor at the time of making his application, believed himself to be the first inventor or discoverer, a patent will not be refused on account of the invention or discovery, or any part thereof, having been known or used in any foreign country before his invention or discovery thereof, if it had not been before patented or described in any printed publication.

The purpose of the patent law is as stated in the Constitution, Art. 1, Sec. 8, "to promote the progress of science and the useful arts", and this means progress in this country. Anything which does not give the invention to the public of this country will not promote such progress and therefore Congress has enacted Section 4923 of the Revised Statutes. (*Ex parte* Grosslin, 97 O. G., 2977; 1901 C. D., 248). The provision that use in a foreign country should not render a patent void if the applicant at the time of making his application believed himself to be the first inventor, first appeared in Act of 1836, section 15.

For the purpose of defeating a patent application a reduction to practice in a foreign country is a nullity unless the invention is patented or described in a printed publication. It can never destroy a patent applied for here, however widely known such reduction to practice may be, either among foreigners or among persons living here. (De Kando v. Armstrong, 169 O. G., 1185; 1911 C. D., 413; 37 App. D. C., 314; Westinghouse Machine Co. et al. v. General Electric Co. et al., 196 O. G., 276; 1913 C. D., 493; 207 Fed., 75, C. C. A. 2nd Cir.)

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Construing sections 4886, 4920 and 4923 together, it is only essential that the applicant here be ignorant of the existence of the invention or its use abroad. (Doyle v. Spaulding et al., 27 O. G., 300; 1884 C. D., 181; 19 Fed., 744. C. C. N. J.)

Mr. Walker in the 1904 edition of his book, Walker on Patents, states that, in view of the decision by the Circuit Court of Appeals for the First Circuit, Aldrich, District Judge, in the case of American Sulphite Pulp Co. v. Howland Falls Pulp Co., 80 Fed., 395, it appears to be immaterial to an inventor's right to a patent whether or not, after completing his invention and before filing his application, he learns that the invention has been in public use in a foreign country since a time prior to his invention. It seems doubtful, however, whether the facts in that case, which are somewhat more fully set forth in the decision of the lower court (70 Fed., 986, C. C. Me., Putnam, Judge), warrant such a deduction. In that case the applicant, Russell, had completed his invention in this country before learning of the use in a foreign country. Both courts say that it must be admitted that the invention was in use in the foreign country before Russell's conception here. It is also stated that a Mr. Springer who had investigated the use abroad shared his knowledge with Russell before Russell filed his application. The lower court says, however, that "he probably retained some portion of Springer's original doubts". Moreover, an examination of the original oath on file in this office shows Russell swearing that he "verily believes himself to be the original, first and sole inventor". While his information might ordinarily put him on inquiry as to what was in use in a foreign country the patent laws do not require that an original inventor in this country shall go to the expense of the complete investigation necessary to remove all doubt in his mind before filing his application. If, however, he is absolutely convinced, before filing his application, of foreign public use prior to his invention he will be unable to make the oath required by Section 4892 of the Revised Statutes. The requirement for an oath is not waived by Section 4923. On the contrary the statute in express terms extends its protection "Whenever it appears that a patentee at the

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time of making his application for the patent, believed himself to be the original and first inventor or discoverer of the thing patented * * * ".

The condition, appearing in the last two lines of Rule 27, "if it had not been before patented or described in a printed publication", is similar in wording to Section 4923, Revised Statutes. The reason for this provision of the statute is that where an invention has been made accessible to the public, by a patent or a description published in any country, before the applicant's invention, it would not promote industrial progress to grant a patent in this country. A patent under such circumstances is barred under the provisions of Section 4886, Revised Statutes.

(Mr. Tullar's paper on Rules 28 and 29 will appear in the December number).

A LETTER FROM THE ALIEN PROPERTY CUSTODIAN.

The following letter has been sent for publication by A. Mitchell Palmer, Alien Property Custodian, under date of October 1, 1918. The circular to which reference is made may be obtained by writing to the Alien Property Custodian, Sixteenth and P Streets, N. W., Washington, D. C.

I will greatly appreciate it if you will call the attention of the readers of your publication to the provision of the "Trading with the enemy Act" which provides that all money or other property held by, for, or for the account of, or the benefit of, an enemy or ally of enemy, should be immediately reported to this office. This includes patents, trademarks, copyrights, prints, labels, and designs.

In connection with the last named, the following persons are required to make report to this office:

All persons who are in any manner interested in the use or operation of any enemy owned patent, trademark, copyright, print, label, or design, including joint inventors, where one of the inventors is an enemy within the provisions of the "Trading with the enemy Act".

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Assignees of an undivided part or share of an invention, or right to carry on a process or operate under a trademark, copyright, print, label, or design within and throughout a specified portion of the United States, when such patent or process is enemy owned.

Mortgagees and licensees of enemy owned patents, trademarks, copyrights, prints, labels, or licenses.

The above includes guardians, executors, and administrators.

Any information regarding the enemy interests in any patents, trademarks, copyrights, prints, labels, or designs, should be forwarded immediately to Francis P. Garvan, Director of the Bureau of Investigation, Alien Property Custodian's Office, Washington, D. C., even if the information is only gossip or rumor. Oftentimes a clue to important enemy interests is obtained in this way. I feel sure that I can count upon your coöperation in the work of uncovering money and property of enemy character. The money thus obtained is invested in Liberty Bonds, and is made to fight for our country, instead of against it.

I am enclosing a circular of information defining "enemies" within the provisions of the "Trading with the enemy Act".

Thanking you, I am,

Very truly yours,

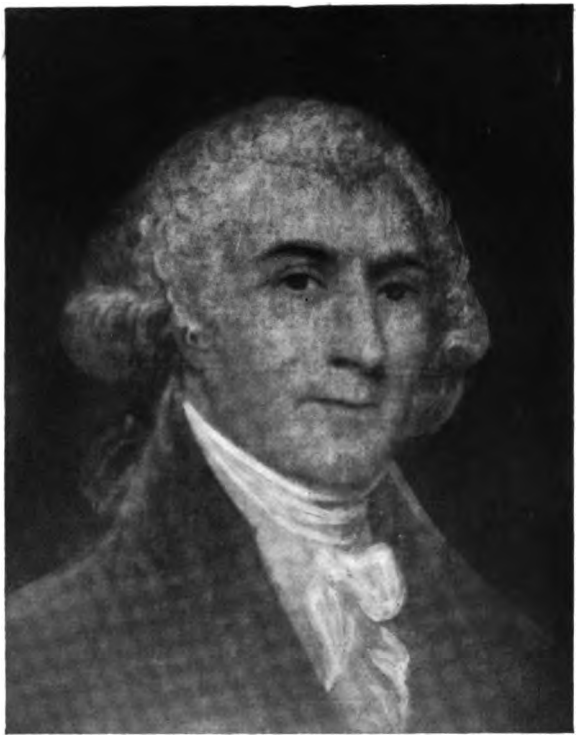
A. MITCHELL PALMER.

THE PATENT OFFICE IN 1841.

"The Reference Book of the United States," a little volume of seventy-two pages, "compiled from authentic sources by Edmund F. Brown" and published in Washington in 1841 by Blair and Rives, Printers, which at that date served the purpose of the "Blue Book" or Official Register of the present time, groups the employes of the Patent Office and National Gallery under the Department of State. The complete roster of the Patent Office included the Commissioner, Chief Clerk, four examiners, four draftsmen, one machinist, six clerks and one messenger.

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DR. WILLIAM THORNTON.

Reproduced from a painting hanging in the office of the Commissioner of Patents.

A copy painted by Dr. Thornton after Gilbert Stuart.

(See article on "The First Chief of the Patent Office," page 152.)

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Publication of signed articles in this journal is not to be understood as an adoption by the Patent Office Society of the views expressed therein. The editors are glad to have pertinent articles submitted.

VOL. 1. DECEMBER, 1918. No. 4

EDITORIAL.

We desire to extend to the men who entered the military and naval service from the Patent Office a word of Christmas Greeting. That all have done their full duty at home or abroad will go without saying.

Those, fortunately few, who have been called upon to make the supreme sacrifice leave behind them a lasting radiant memory, an example in patriotism in which we all take pride and which we must hold in reverence.

Those still in the service we greet with congratulations and best wishes. When the need for them in the Army

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or Navy is over, we shall welcome them again to the Patent Office force. We realize that their response to the call of hazardous duty has imposed obligations on us all to similarly hold ourselves in readiness to serve our country.

May the coming Christmas season be one of joy to all mankind and especially to those Americans who have offered themselves in defense of American principles.

The well-known purpose of the patent system is to encourage and stimulate invention. To this end a reward is offered in the shape of the exclusive right to make, use, and vend the invention. The public itself has agreed to grant this reward, but in return therefor it expects to receive the knowledge of something which it never before possessed. It is quite in accord with human nature that there should always be attempts to secure something for nothing, and that in this case there should be attempts to secure the public reward without having rendered to the public the required service. Whose duty is it then to protect the public interests? In order that full justice should be done to the inventor, the public has safeguarded his rights probably beyond that of any other species of property rights. If he is refused the grant of a patent by the first tribunal he is entitled to have this decision reviewed by five other tribunals. But suppose any one of these tribunals decides in favor of the rights of the inventor, who reviews its decision? No one. In some countries where the public interests are not generally so carefully guarded as here, a check is interposed in the nature of opposition proceedings. Such being the situation, and remembering that every patent that is granted may exact a tribute from the public, it becomes incumbent on those charged with the duty of granting patents to scan carefully the claim of the inventor to determine if he is entitled to the public reward. Appreciating the situation, the law has specifically placed the duty of safeguarding the public interests on the shoulders of the examiner.

The article in the November number on classification of patents is entitled to thorough consideration, because it represents the views of one who has an extended experience in this most difficult branch of Patent Office

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work. It attempts to cure present defects of classification by constructive criticism.

In every branch of science where classification has been found necessary, controversies have always raged as to the propriety of the different schemes.

It should be remembered, however, that the value of a criticism is coextensive with the knowledge that the critic may have of the subject under consideration. It is not an uncommon failing to criticise the work of those who, we well know, have been selected for the very purpose of, and are devoting all their time and energy in, the solution of a problem. But how uninteresting a baseball game would be if the man on the bleachers were not able to criticise the decision of the umpire.

It would be interesting, if it were possible, if some industrious individual would take some unpatented article, for instance, a leather shoe, and figure out in its manufacture from raw material to the finished article how many times it has been taxed and its price enhanced by virtue of its contact with patented machines or processes.

Eight million dollars in the Treasury of the United States to the credit of the United States Patent Office! This huge credit represents the accumulation of the surplus earnings of eighty years. Hardly a year has passed since 1838 when the receipts of the Office did not exceed its expenditures. In fact there are some years when the surplus earnings were nearly thirty per cent of the total receipts. Have we been following a wise policy in refusing to spend on the Patent Office the money that has been contributed by the inventors of the country for that purpose? Bureaus of the Government such as the Patent Office are not intended to be money-making institutions, for, if they were, it would be an inequitable form of taxation. It is not too late, however, to effect a reform in this direction. Inventors and manufacturers should emphatically call the attention of Congress to the necessity of at least spending the income of the Patent Office in providing adequate facilities for conducting its business.

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THE FIRST CHIEF OF THE PATENT OFFICE.

BY WILLIAM I. WYMAN.

Previous to 1802, the administration of the patent system was conducted as part of the general clerical business of the State Department. In that year the Patent Office, as a distinct unit, was created, and Dr. William Thornton was appointed as its first superintendent, at a salary of $1400, by Secretary of State Madison. The Office was not established by law, but was instituted through Madison's action. It was the only personal appointment made by Madison upon his accession to the portfolio.

Dr. Thornton was of English extraction, a graduate of medicine in Edinburgh, and had traveled extensively in Europe. He was the first designer of the Capitol, had a scientific turn of mind and was a man of varied accomplishments. He was appointed by President Washington a member of the Board of Commissioners under the act to establish a seat of the Government. At his suggestion the first agricultural fair in this country was held, in 1804, in Washington. He was a gentleman of culture, entered vigorously into the intellectual and social life of the time, was on intimate terms with the prominent men of the day, and was a very close personal friend of Madison, who lived next door to him in Georgetown. In fact, he and Madison were partners in the possession of a race horse, although there is no record of any utilization of the animal for track performances during its distinguished ownership.

Dr. Thornton was a man of marked individuality, which he impressed upon the conduct of affairs during the long occupancy of his office. His official position did not deter him from granting patents to himself or otherwise acquiring property-rights thereto. In fact, while thus acting, he suggested to one applicant an improvement for his device, and thus became a joint patentee in the invention. He performed his duties with a laxity, sometimes, and with a disregard for law on occasion that would have been reprehensible under other circumstances. He exercised his own judgment about the pay-

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ment of fees, he failed to record the grants with any regularity, and in general assumed arbitrary or discretionary powers that were either extralegal or contrary to law. But his deficiencies, such as they were, were due to enthusiasm overpowering discretion. His sense of personal ownership in the Patent Office was the result not only of an intensive and absorbing interest in the promotion of its objects, but of the neglect of Congress, which left him to his own devices and which even in those early days made its peculiar indifference towards the Office very manifest.

It also appeared from his numerous complaints to the various Secretaries of State who were his immediate superiors during his long incumbency that he was considerably handicapped by insufficiency of clerical assistance, that the exacting character of his work occasioned by its peculiar technical requirements was unrecognized, and that the pecuniary reward of the position was not only beneath the dignity of his office, but was also inadequate to provide means for a proper standard of living.

There can be no doubt that the promotion of the benefits of the patent system was the passion of the learned doctor. He was incessant in his devotion to the Office, and was extremely energetic and insistent in spreading the doctrine of its usefulness and in endeavoring to administer the Office in accordance with justice to the inventor and the rights of the public. If these objects were pursued in his peculiar manner rather than in view of the limitations imposed by the mere verbiage of the statutes, it is to be remembered that many a substantial equity was thus preserved and some very beneficial practices initiated. Among these was the procedure in granting a new patent without fee for the unexpired term of the original patent in view of any defect in the latter, whether occasioned by the patentee or the Office. The legality of these acts was tested and confirmed in the case of Grant v. Raymond (Supreme Court, U. S., 1832). In the opinion of one authority, Dr. Thornton defined (in a communication to the Secretary of State, dated January 6, 1818) the equities and limitations of a reissue as concisely and luminously as has ever been done by any court or text writer. From this practice of Thornton's the act

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of 1832 developed, providing for the reissue of a defective patent.

In 1810 Congress authorized "the purchase of a building for the accommodation of the general post-office and of the office of the keeper of patents". The building purchased was known as Blodgett's Hotel and in 1811 the business of the Patent Office was removed from a house on Eighth Street, just below F Street, to the second floor of the new building, where it remained under the superintendence of Dr. Thornton until his death, which took place on March 27, 1828.

Dr. Thornton was born on the island of Jost van Dyke, British West Indies (not in Tortola, as erroneously and customarily stated). He landed in this country in 1786 and took the oath of fealty in 1788. In response to an advertisement from the Commissioners of the Federal City instituting a prize competition for plans for the Capitol, Dr. Thornton submitted drawings. President Washington, who was much interested, singled out Dr. Thornton's contribution and wrote of it as follows: "Grandeur Simplicity and Convenience appear so well Combined in this plan of Dr. Thornton's, that I have no doubt of its meeting * * * approbation from you." He was awarded the prize of $500 and a lot valued about the same. His plan formed the nucleus of the present structure.

Another notable building designed by the doctor is the Octagon House, at the corner of Eighteenth Street and New York Avenue, one of the noblest and most original examples of colonial architecture in the country. President Madison occupied it as a residence after the White House was burned in 1814, and while resident there he signed the treaty of Ghent (which terminated the second war with England) in the circular room—now used as the Secretary's office of the American Institute of Architects. He also made designs for the buildings of the University of Virginia at Jefferson's request.

He co-experimented with John Fitch in the perfecting of a steamboat, and appeared at one time to be under the impression that he, rather than Fitch or Fulton, was the actual inventor. He also took out a number of patents, without being at all idle in other directions. His "Treat-

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ise on the Elements of Written Language" was a prize essay and won him a gold medal from the American Philosophical Society. He also wrote on political economy and in fact practised every art except that in which he was educated and had intended to take up as his life work. He lived an intensely intellectual life and yet kept open house and entertained as lavishly as his resources permitted. Distinguished visitors from abroad were frequently his guests, among whom may be mentioned Humboldt, the famous traveler, who recorded his gratitude for the quality of his entertainment. The doctor was "a Quaker by profession, a painter, a poet and a horse-racer". His latter activity was by no means of a dilettante order, either. With all these diverse concerns, he found time to interest himself in the development of the Capitol City, his interest being particularly intensive and his optimism as to its future unbounded. His prediction that it would attain eventually a population of 160,000 was treated contemporaneously as an explosion of ultra-enthusiasm. In fact his "partiality was such that in intervals of health he praised the salubrity of the Washington climate".

His wife's estimate that "His search after knowledge was perhaps too general, as it embraced almost every subject; * * * philosophy, politics, finance, astronomy, medicine, Botany, Poetry, painting, religion, agriculture; in short all subjects by turns occupied his active and indefatigable mind" appears to be a correct judgment of his undue versatility of interests and talents. A restriction to a lesser number of activities would undoubtedly have made his impress upon history of a more permanent nature.

His correspondence was voluminous, always vigorous, and international in scope when it came to patent and scientific subjects. His papers and writings he left as part of the archives of the Office "as a monument of his fidelity to and interest in the advancement of American Mechanics." His career is indeed a monument of those attributes, for his life was a sacrifice on the altar of duty, unappreciated and unrecompensed by the public he served so well.

The energetic character and invincible ardor of the first Superintendent of the Patent Office is best illustrated

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in the following incident, vouched for by Robert W. Fenwick, an authority on the early history of the Patent Office: "In connection with the History of the Old Patent Office, it should never be forgotten that by the patriotism and scientific devotion of Dr. Wm. Thornton the germ of our grand patent system was saved from destruction by the British soldiery. It was related to the writer by Mr. Seth A. Elliot, another son of William Elliot, that as the British commanding officer was about to have the torch applied to the Patent Office building, Dr. Thornton appeared on the portico and earnestly cried out, 'This is the emporium of the Arts and Sciences of America; don't burn it'. To the credit of the officer, be it remembered, he listened to the appeal, and gave orders to his soldiers to pass on without burning the building." Of several accounts of this incident, no two of which agree in details, this one appears to be the most authentic.

ASSISTANT EXAMINERS WANTED.

A number of vacancies exist in the grade of fourth assistant examiner, carrying the salary of $1,500, to which the attention of technically trained persons is earnestly invited.

Permanent appointments will be secured by passing the required Civil Service examination, information whereof may be had upon application to the Civil Service Commission, Washington, D. C.

Temporary appointment may be given persons exhibiting the required training in mathematics, chemistry, physics, mechanical drawing and French or German, pending their taking the Civil Service examination and obtaining a rating therefrom.

Persons having the necessary education are invited to write to the Commissioner of Patents with regard to temporary appointments.

Promotion to the higher grades is reasonably rapid. The work commends itself to college and technical school graduates especially, and is considered as interesting as any in the Government Service.

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COMMENTS ON EX PARTE THOMAS.

BY E. S. GLASCOCK, Examiner.

The decision in *ex parte* Thomas, 251 O. G., has been studied and discussed very thoroughly by both attorneys and examiners, as also has that of Diamond Drill Co. vs. Kelly Brothers, 120 Fed. Rep., 282, 286, cited in the former.

To one feature of these decisions I should like to call close attention, namely, the drawing a distinction between disclosure which is regarded as anticipation, and disclosure regarded as sufficient to sustain the defense of prior invention.

There is no disposition to criticize the decisions as applied to the conditions now existing, but merely a desire to point out that they are landmarks which show how far we have departed from a logical development of the patent system as originally contemplated by the statutes.

The *ex parte* Thomas decision comprises an analysis of a large number of court decisions, and the point most clearly brought to light by this analysis is that the decisions do not agree. On the contrary, while many may be warped into some sort of harmony, the view taken in one group of the decisions cited is so plainly contradictory of the view taken in some of the other decisions and adopted in *ex parte* Thomas, that the only recourse is to pronounce that group heterodox and overcome by the greater weight of authority on the other side.

However necessary or expedient appeal to precedent may be in all legal procedure I would, with all due respect to the courts, question the expediency of attempting to extract from the multitude of opposing rulings some complicated doctrine that will contravene as few precedents as may be.

The peculiar nature of patent practice; the fact that questions of a scientific nature are involved in decisions made by those who avowedly are entirely devoid of scientific training, and whose experience may consist of one patent case in a life time; the fact that the courts deal with a fixed contract while the Office deals with the formation of that contract, and the fact that when that con-

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tract is faulty, there is an ever present temptation to uphold justice in the individual case and fit the law to the conclusion already formed, in lieu of drawing the conclusion from the law;—all these factors have acted and reacted on the Patent Office and the courts until it seems that we have wandered from the clear light of the statutes themselves, and it were well to hark back to that original source instead of wandering through interminable labyrinths of incompatible decisions.

I ask a view of this question in the broad light of the statutes and without the intervening mists in which a mass of conflicting decisions has enveloped it.

What is meant by the words "art, machine, manufacture, or composition of matter" in R. S. 4886? We know the object of the statute and must read it with that object in view. These words clearly cannot mean the actual physical machine or composition of matter for which a patent is issued, nor the exact and actual process. Such a reading of the statute would render it practically void. It may be taken as axiomatic that it is whatever constitutes the actual invention that is to be protected. Now what is the actual invention? This question is answered clearly by Robinson, who says, Book I, Par. 130, "Finally, it is to be remembered that although an idea of means not yet reduced to practice is not an invention, still it is the idea, and not the practical embodiment which constitutes the essence of the invention and to which the protection of the patent is awarded." Again in Par. 141, he says, " * * this principle (the idea of means) is the true subject matter of the patented invention. Whatever forms of tangible expression it receives through the varied skill and industry of the mechanic, this idea and essence still remain unchanged".

The practical embodiment of the invention is not the invention, it is merely the expression of it and no more identical with it than is the sentence identical with the thought which it clothes.

A patent is a contract and one absolutey essential characteristic of a contract is a clear setting forth of the considerations. The statutes therefore require that the inventor shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his discovery.

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It is thought our difficulties spring from the neglect of these two facts:

I. The patent is granted for the essence of the invention and not for its physical embodiment, and, II. The essence of the invention must be distinctly set forth in the claim.

Every invention is an idea of means embodied in a practical instrument or process. The accidents of the practical instrument or process are of no moment whatever. All expression of them must be eliminated from any claim before it can be said to define the invention. Every foreign element must be deleted from a claim in order that it may set forth an invention correctly. And it must be remembered that a characteristic of the physical parts of the practical embodiment which does not have a vital bearing on the spirit of the invention is as truly a foreign element as is a physical element that is foreign to the real invention.

The statutes provide that upon due proceedings had a patent shall be granted for an invention subject to two conditions only, viz., (I) It must be novel, (II) It must be useful.

As long as these statutes stand no power can take from or add to these conditions.

The resemblance or lack of resemblance between the physical embodiments of a plurality of inventions has absolutely no effect. And when we take this resemblance or lack of resemblance into account and make it a ruling factor in a decision as to whether or not a patent shall be granted we proceed without any basis in right or in law. Any two inventions are necessarily identical, or not identical. If identical the law is plain; if not identical the law is equally plain. There are but two horns to the dilemma or rather there are but two equally plain paths to be pursued. There should be no dilemma. Yet there undoubtedly is one and a very serious one. Why? Because we have not kept in view the essential nature of an invention and the manner in which it should be set forth in a claim. The confusion of an idea of means with the accidental, non-essential features of its physical embodiment and the inclusion of such features in the claims have led us into such illogical procedure as the rejection of a claim on a plurality of references, and a discussion of the degree of resemblance between inventions.

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The resemblance is necessarily between the accidental features of the physical embodiment. It is clearly impossible that any resemblance can exist between two distinct inventions that would in any way affect their patentability. And yet we have gone so far as not only to reason about this resemblance of distinct inventions as a bar, a thing never hinted at in the statutes, but we have even made distinctions on the degrees of this resemblance which are to form bars to the grant of a patent, under different conditions.

There is another point in the decision in *ex parte* Thomas to which I invite attention, viz., the holding that only that matter, shown and described but not claimed in a "co-pending patent," that is germane to the matter claimed, can be used as a valid reference against the co-pending application.

It seems to me that the true position is the one stated by Mr. W. W. Dodge of the District of Columbia bar, in his pamphlet on Earlier Application and Later Patent vs. Later Application and Earlier Patent, P. 5, Par. 3,

> Such earlier application likewise shows beyond controversy, unless and until overcome by proper proof, that such later applicant but earlier patentee "was not the first and original inventor or discoverer of any material and substantial part of the thing patented" (Par. 4920, R. S., fourth defense), in so far as the earlier application discloses he patented invention; and that it was not "new". (Par. 4886, R. S.).

After citing Kearney vs. Lehigh Valley Railway Company, the decision (*ex parte* Thomas) proceeds: "This clearly decides, first, that an invention is not anticipated unless by an invention which was completed before it (the former) was completed; second, that the filing of an allowable application is completion of the invention; third, that where the question concerns the 'priority' of one of two or more patents over the other or others the invention of the prior patent can be carried back to the date of the application on which it was granted."

Having established this much the decision goes on to introduce the factor of a distinction between the disclosure which would sustain the defense of "prior invention" and one which would sustain the defense of "anticipation". With reference to this distinction the decision says:

> Upon the defense of anticipation the question concerns sufficient novelty to require invention. Under that of prior invention the question concerns identity of invention. The patent

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(to Maier) relied upon to defeat the patent in suit disclosed and presumably claimed a bed-spring, and the patent in suit (to Jackson) claimed a belt-fastener, the disclosure, and probably the claim in the former and the claim in the latter, including common subject-matter which constituted the novelty in both articles. The decision held that Maier would not anticipate Jackson were the date of Maier's patent such that his disclosure would be available for anticipation, but that even if that disclosure would be sufficient for anticipation it was insufficient for prior invention because the inventions were not the same. It does not appear from the decision that what Maier claimed was considered material or would be material if the defense of prior invention were in issue.

The following extract from Sundh Electric Co. vs. Interborough Rapid Transit Co. (222 Fed. Rep., 334) is also quoted:

In order to maintain this fourth defense it must, of course, appear that the invention of the patent in suit and the invention of the prior application are the same. Thus in Diamond Drill Co. v. Kelly, *supra*, the patent in suit dealt with a belt-fastener, the prior application with a bed-spring. That court held that even though it should be found that these were analagous arts and that the presence of either in a prior field of art left no room for invention in the production of the other, it could not be said that both had invented the same thing. But it does not follow that the two devices must be Chinese copies of each other to warrant the application of this particular defense.

A group of decisions rendered by the Circuit Court of Appeals in the Sixth Circuit is then discussed.

This latter group fails to make the distinction between "anticipation" and "priority", or at the least fails to apply it in the manner of the decisions previously cited, and in *ex parte* Thomas the following conclusions are drawn:

I think that the group of decisions by the Circuit Court of Appeals of the Sixth Circuit, even with such support as may be derived from the remark made by the Supreme Court in Pope v. Gormully Co. and from Hillard v. Fisher Co., are opposed to a greater weight of authority so far as they decide that the fourth defense of anticipation and that a patent not granted before the date of perfection of the invention in controversy is a part of the prior art and so far as they ignore the essential difference in the natures of the defenses of anticipation and priority and fail to recognize that the latter defense requires a degree of resemblance between the invention in controversy and the invention disclosed in the patent supposed to show prior invention which need not always subsist between the invention in controversy and an anticipating invention. In so deciding, these decisions neglect the element of publicity, considering the subject as if it involved only one of the two questions pointed out in the foregoing analysis—that which concerns the evidence of a fact. The necessity of publicity of a previous invention before the establishment of the legal right to patent protection in order to defeat that right by anticipa-

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> tion is supported by a great volume of authority. The decisions opposed, in the particulars stated, to the decisions in this group not only outnumber those in the group, but admit of being combined with nearly all other decisions which are in any way related to the subject in the construction of a self-consistent and tenable theory.
>
> Furthermore, the logical conclusion of the reasoning in this group of the sixth circuit decisions is that applications which have been forfeited and abandoned (about two hundred and fifty thousand in number) are available as references; but it was decided in the Corn-Planter Patent Case (23 Sup. Ct. Rep. Wall., p. 181) that such applications are not valid references:
>
> It (abandoned application) can only have a bearing on the question of prior invention or discovery. If upon the whole of the evidence it appears that the alleged prior invention or discovery was only an experiment and was never perfected or brought into actual use, but was abandoned and never revived by the alleged inventor, the mere fact of having unsuccessfully applied for a patent therefor, cannot take the case out of the category of unsuccessful experiments.
>
> . . . . . Priority concerns identity of invention, while anticipation concerns the presence of patentable difference. Two practical effects of the distinction are, first, anticipation is not subject to abandonment; second, knowledge of the prior invention need not be accessible to the public at the date of completion of the invention in controversy. The defense of prior invention proceeds upon the supposition that a legal right has been established and not abandoned which is antagonistic to the right of the inventor of the invention in controversy.

And lastly,

> . . . . . The dominating question is, to what is the public entitled upon all grounds, including the abandonment completed by the grant of the co-pending patent? Subject-matter disclosed but not claimed therein may or may not be, in fact, a part of the virtually known art anterior to the date of the application on which it was granted. If it is, the public is of course entitled to it. If it is not, the public is entitled to it by virtue of the patentee's abandonment, which occurs if he might have claimed it. He might have claimed any patentably novel subject-matter clearly disclosed in the application upon which his patent was granted which is germane to what he did claim.

It would appear that a clear distinction may be drawn between the third and fourth defense without taking into consideration the question of whether the original inventor or the public has the legal right to the invention.

The statute does not make the opposing right of anyone a factor in the fourth defense.

The third defense hinges on publicity, that is the essential fact to be established and that alone decides the question.

The fourth defense hinges on originality and priority. It does not concern itself with any rights acquired by

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that priority, but with the effect of that priority on the patent in suit.

To turn the argument on the rights acquired by that priority is to go too far afield and confuse instead of clarifying the issue.

The logical conclusion from this is not that forfeited and abandoned applications are available for references, as may be seen by an examination of the statute, considered with the broad object of all patent legislation kept in view.

That object is the progress of the arts, and therefore the terms "inventor" and "discoverer" have been properly construed to include only such inventors or discoverers as have developed and given such form and made such record of their invention that it will inure to progress in the arts. Discoveries or inventions locked up in abandoned and forfeited applications are not included in this category. It is not the abandonment of a right that voids these still-born devices but the fact that they will never aid the progress of the arts.

It is denied that "the defense of prior invention proceeds upon the supposition that a legal right has been established and not abandoned." The defense of prior invention proceeds upon the supposition that the patentee of the patent in suit was not the original and first inventor. *Ex parte* Thomas shows that cases arise where procedure upon the former supposition leads us astray.

The above decision must, on the theory on which it is based, consider the relation of the unclaimed disclosure of a co-pending patent to the matter claimed in order to ascertain the nature of these "opposing rights".

If on the other hand we hold ourselves rigidly to the language and meaning of the statute it is clear that any novel invention disclosed in a patent was completed at the time of the filing of the application on which the patent was granted and is prima facie evidence that a later applicant is not the first inventor. From the date of that application the invention was embodied in an instrument destined to reach the public and hence to aid in the progress of the arts. It was therefore in the sense of the statute an invention or discovery. It is a matter of utter indifference whether or not it is germane to the invention claimed in the patent which discloses it.

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VALID PATENTS.

BY WALTER M. FULLER, Chicago.

Within the last few years there has seemingly been inaugurated by the executive heads of the Patent Office a policy of bringing up the work of the examining corps into restricted time limits, necessarily shortening the prior art searches, in an apparent effort to overcome the burden of work resting on the examiners' shoulders. Surely, any attempt to expedite the maturing of applications into patents is to be commended, provided it is based upon a safe and sound foundation. The writer, for a number of years, was an assistant examiner and knows full well the various disadvantages under which the examiners labor.

In the September, 1918, number of the Journal of the Patent Office Society, page 16, the Assistant Commissioner, in addressing the fourth assistant examiners, approved such a program in the following words:

> This brings me to the main point I wish to make, namely, that however it may be with the business man, it is of supreme importance to the inventor and to the public that patents be both *applied for and granted promptly*. Coming directly home to you, this means that one of your primary duties is to see that when applications are filed in this office they proceed without delay to patent. It is quite possible that promptness in the work of this office is as important as thoroughness. In other words, if you have to choose between making a less thorough examination and a general and material delay in getting the applications through, it is probably more to the public interest that the prosecution be prompt. At least, I am justified in saying that if your examination is not sufficiently thorough, this is directly the fault of Congress, and is so provided in spite of the attention of Congress having been repeatedly called to the shortness of force and the necessity of an examination that is not sufficiently thorough. I have been an inventor, and I think myself (and I believe it wise to say so), that the inventor at the present time is not getting the examination he actually pays for.

Of course, Congress for years has ill attended the pressing needs of the Patent Office and has never given it an examining force commensurate with either the amount or the importance of its work. However, the policy of subserving or subordinating careful, thorough, and painstaking prior art searches to the prompt issu-

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ance of patents is, in the estimation of the writer, one not only fraught with danger, tending to bring this office into general disrepute, but also not the most feasible course to lead to the correction of the indifferent and negligent attitude of Congress toward the Office. The fundamental purpose of the Patent Office should be to lend its every effort to the granting of valid patents only and all other considerations should be secondary to this. Of course, 100 per cent perfection in this respect is impossible, but it should be the aim and ideal nevertheless. A patent, invalid because of lack of adequate prior art search, deceives and injures both the public and the patentee. The former is threatened and deluded from enjoying the benefits of that to which it is entitled and the latter is not infrequently lulled into a sense of false security and his backers into misleading and unsafe financial investments. The establishment of the invalidity of a patent in court is usually a rather expensive proceeding.

It is asserted that so long as the examining work of the Office is maintained prompt at the expense of scrupulous, faithful, and ample prior art searches, no remedial action can be reasonably expected from Congress. Such a course of lax and superficial procedure, sanctioned by the responsible officials, is sure to lead to an undue percentage of patents with invalid claims and to the establishment of careless habits of work on the part of the assistant examiners detrimental to their future careers, and which, if once well inaugurated, will be exceedingly difficult to uproot. In time such a policy is almost certain to throw the whole invaluable patent system into ill-repute, both with the public and courts, and, if this program is persisted in, I should not be surprised to find a sharp rebuke administered by some court which has been harassed by a succession of patent infringement suits based on invalid patents.

The law charges the Commissioner of Patents with making an examination of the novelty of the alleged invention of an application. It sets up no time barrier in this respect. Apparently, then, when an examiner is confronted with a dilemma of cursory examination on the one hand or a delayed issuance of the patent on the other, he really has no choice as to the course to pursue, if he is to observe the spirit and letter of the law.

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When an inventor files his application and pays his filing fee he is entitled to have a reasonably complete prior art search by an examiner skilled in that industry and a patent issued on anything less than this is not only unworthy of the Government but is a deception practised on the inventor and the public. The present policy of the Patent Office carried to an extreme would render it nothing more than a registration bureau, a condition certainly never contemplated by the law.

I have read the above quotation to a number of inventors and without exception they have been surprised and alarmed that the Patent Office should lend its aid to a plan tending to deprive the inventor of that to which he is clearly entitled, namely, a valid patent.

It is, therefore, respectfully submitted that when the Patent Office finds itself confronted with two diverging paths, one representing careful, thorough, conscientious work, and the other speed, the former should be chosen because it is required by law, fairer to the public, more just to the inventor, and in the end more likely to lead to the provision of proper relief by Congress.

A SINGLE SERIES OF PATENT REPORTS.

A prominent member of the Washington patent bar, in a letter transmitting his subscription, hopes that efforts will be made to speed the time when we shall see "all judicial decisions, both in the Patent Office and in the courts, relating to Patents and Trade-Marks, published either in the Official Gazette, or better, in a weekly supplement thereto.

"At present there is no publication wherein all such decisions can be found, and every one who wants to keep fully informed must subscribe or have access to the Official Gazette, the Federal Reporter, Supreme Court Reporter, Reports of C. A. D. C. and the Trade-Mark Reporter, and even then fail to obtain all decisions promptly and accurately. Such a supplement to the Official Gazette would, I believe, have a large and popular demand, and would be highly useful both in and out of the Patent Office and tend to harmonize and unify practice."

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A SUGGESTION FOR IMPROVING PATENT OFFICE SEARCHES.

BY W. L. THURBER, Examiner.

For years it has been a matter of regret that the Office search was not more reliable.

In the opinion of the writer it is not believed that any very startling changes would be necessary to make investigations which would compare favorably with the best validity searches made by attorneys. It would cost a little more at first but it is doubtful in the long run if the expense of examining an application would be any greater. Certainly it would not be enough to be prohibitive.

It is thought that all we need is specialization—the keystone of all modern business.

At present an examiner's time is largely spent in reading cases and making searches, two quite distinct duties. The first requires intelligence, adaptability and industry —qualities which there was never great difficulty in obtaining prior to the war. To make a proper search, however, experience is needed, and this is something rarely found on the market. To exhaustively investigate the prior inventions in any particular line, especially in the heavier arts, one must be thoroughly familiar with the field and it requires years of close application to that particular field to attain this. Right here, as we all know, is where the great difficulty lies, for no sooner does a first-class examiner become somewhat familiar with an art than he is offered such inducements on the outside that he does not feel justified in remaining.

Now here is the suggestion which is offered. Let us pay for experience enough to retain it—but let us use to best advantage this high-priced article. Since the search is the only part of the examination which cannot be carried on fairly well by those of little experience, let the experienced devote their entire time to this work.

For illustration, take the art of printing. To handle this field in normal times would probably require about four examiners. Let us now select one of these men, of

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course one who is competent and industrious, preferably the one who is most familiar with the art, and if possible one who prefers work in the Office to that ouside—provided the remuneration is sufficient. Let us pay this man four or five thousand dollars a year and let him devote his entire time to searching and to digesting and arranging his art so as to have it as nearly as possible at his finger ends. Let the others read up the cases, analyze the claims and report to him the features on which search is required. At first this searcher will need some assistance, but in time he will attain such familiarity with his art that he will be able to make his searches not only much more thoroughly, but much more speedily than the average examiner. His work will cease to be drudgery and will become the pleasant occupation which mastery always brings.

With this expert at his post, the art of printing will be well guarded, and it it not very material how often the personnel of the case readers changes. They will be bright, intelligent, young college graduates, perfectly capable of carrying on the routine work while they pursue their law courses and fit themselves to go out into practice.

If ths plan were adopted throughout the Office, in a few years we ought to have a force of experts that would be the admiration of the patent world, and when novelty had been reported favorably by this organization it probably would be as near final as is humanly possible.

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NOTES ON PATENT SOLICITING FROM THE SOLICITOR'S POINT OF VIEW.

[Author's name withheld by request.]

Preparation of Drawings.

The drawing of a patent application should be thoroughly accurate. Some Patent Office draftsmen are prone to make drawings which are more or less sketchy. Drawings should be made to scale. Draftsmen also are apt to omit little details and mechanical features, judging them to be of no importance. Particularly when the drawing is made from a commercial article, the solicitor should require that the drawing be accurate. It is to be presumed that the manufacturer has a reason for the details embodied in the device. When the application drawing is submitted to the manufacturer he is likely to notice departures from his construction and to consider that the work is somewhat below par. Moreover, for the educational effect upon the draftsman, accurate work should be insisted upon.

A particular detail may at first appear of no consequence, but a more careful study may show that it has some function or utility. Even though it may not seem necessary to mention the detail or its function in the specification, there is nothing to be lost and possibly something to be gained by having the drawing accurate and complete. Some contingency may arise during the prosecution of the application, which will cause the attorney to congratulate himself on having insisted on accuracy in the drawing.

When an expert witness is testifying in regard to a patent, he often goes into greater detail in regard to the construction of the device, the manner in which the parts are supported, and the mode of operation, than the specification does. For this reason, it is desirable that the drawings be correct and complete. A disclaimer also may render details desirable. Strause v. Crane, 235 Fed., 126.

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Sometimes the consideration of a detail which at first appears of no importance, will suggest or lead to another matter which is of some consequence.

Preparation of Specifications.

For the preparation of a clear specification, one that will be readily understood by courts or others unskilled in the art, it is essential that the writer analyze the machine or device and describe its parts in logical order. It is better to proceed along functional rather than constructional lines. Ordinarily, parts should not be described until the time comes to set forth their functions.

It is sometimes helpful, as an aid to analysis, to draw a general claim before writing the description. Such a claim should cover all the operations, reciting each group of elements as means, and reciting the groups in the order in which they operate.

Some solicitors in describing a machine "begin with the power and end with the product"; i. e., they begin by describing the drive shaft and the parts mounted thereon, but this method is seldom the best one. It is often helpful first to describe briefly the materials on which the machine operates, the product, and the various steps of the operation, and then proceed with a detailed description of the parts of the machine *in the order in which they operate on the materials.*

The description should be quite full and detailed, whether the invention is broad or narrow. Of course, this does not necessarily mean that every bolt, screw hole and frame bar should be mentioned. If, however, the manner or means of supporting a given part is not perfectly obvious from the drawing, it should be described in the specification.

If the invention is narrow, it is usually well to recognize the prior art in the description, and point out specifically the advance which the inventor has made.

Information as to the state of the art to which an applicant's invention pertains may sometimes be had by reference to adjudicated patents. Various lists of adjudicated patents have been published.

If the invention is a broad one, such language should be used as will indicate that the inventor understood that the details described are not essential. For instance,

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"suitable means may be employed, as for example, a lever", etc. When it is thought that certain parts are dispensable, that fact should be brought out by saying that "if desired", such and such a device may be used.

Unless the invention is very narrow, avoid the use of language which will indicate that the inventor considered a given part or arrangement as essential.

Preparation of Claims.

Before beginning to draw the claims formally, it is very helpful to make a list of all the functions, operations, features, and advantages of the machine or device, and then draw broad and narrow claims for each of such functions, operations, etc.

If the suggested list of features, etc., is prepared, it will prove to be an aid in drawing claims along as many different lines as possible.

Draw claims on single elements of the structure when such elements seem to possess novelty.

In drawing a claim for a particular function or feature, the devices or elements that coöperate with the parts being claimed should be included as broadly as possible. Nothing should be included in the claims which does not concern the feature which the claim is intended to cover; elements which are improperly included either make the claim unnecessarily limited, or render it invalid on the ground of aggregation.

Present as large a number of claims as is reasonably possible when the case is filed. Draw as many detail and narrow claims is will probably be needed. Aim to prepare such a complete set of claims that an action on the merits of the whole invention may be had on the first official consideration, thus expediting the prosecution of the case and also formulating the claims when the subject-matter is most clearly in mind.

But claims should not be unduly multiplied; they should be distinctly different from one another, although the differences need not be so great as the differences between claims in separate patents.

Ordinarily avoid the method of drawing claims which consists in adding an element to the last preceding claim. The new element at least should coact with the old ones, and the relation should be apparent.

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When it can be avoided, the claims should not be drawn so that there will be an element or part which is common to all the claims, because if an infringer omits such part he avoids all of the claims.

Use broad verbs, adjectives and prepositions, for example, "connected to", "associated with", "coöperating with", and "having a driving (or driven) connection with" are broader than "fixed to", "mounted upon", "geared to", etc.

Use broad nouns. "Member" or "support" is broader than "rod", "bar" or "shaft". "Actuating means", "actuator", "driving means" and "driver" are broader than a recital of "shaft", "pulley", "gearing", "crank", etc.

When the breadth of a claim will not thereby be impaired, it is better to use a descriptive noun, as, for example, "cutter", rather than such a term as "cutting means", for the reason that some courts shy at the word "means".

If any preamble is used in the claims, the preamble should ordinarily be broad. However, if the invention is narrow or doubtful, it sometimes is wise to make the preamble quite detailed, as for example, by reciting the conditions under which the device is used.

The form of the preamble is sometimes of importance in construing a patent claim. For example, instead of using the form "In a lathe, in combination", the form "A lathe having, in combination" may sometimes be employed to advantage. In case of a dispute as to the completeness of the claim, the latter form will enable the expert witness to say that the claimed structure is a lathe, and therefore the claim includes, at least by implication, whatever is necessary to a lathe. Of course it is not always desirable to limit to a particular machine a subcombination claim or other fragmentary claim.

When the invention is quite narrow, great care should be taken that the claims clearly and accurately express the invention which they are intended to cover. The exact structure which accomplishes the desired result should be set forth, as well as the peculiar coöperation of elements to produce such results. If the claim does not express the real invention, no amount of arguing can be expected to bring an allowance over close references.

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In cases where the general arrangement of parts is old and the invention resides in a novel subcombination or a special feature of the old general arrangement, it is well to consider using the British type, or German type of claim, or types such as were approved in *ex parte* Brown, 235 O. G., 1355, and in *ex parte* Jepson, 243 O. G., 525. Not all inventions readily lend themselves to this kind of claim, but where the invention is as above described, and in some other cases, such claims may be desirable because of the more favorable impression on the examiner by reason of greater ease in finding the novel feature; and of better reception by the courts for the same reason.

It is desirable to reduce renumbering of claims to a minimum, as renumbering often leads to confusion and error on the part of the attorney, the clerk in the examining devision, and the Government printer. It is therefore well to put the narrower claims first in the application, as these may be allowed and, if so, will never need to be renumbered. Claims that may be withdrawn if a requirement for division is made may be placed at the end of the series. When canceling claims and inserting new ones, the new claims may be given the numbers of the canceled claims, thus filling the gaps among the remaining claims, and obviating the necessity of renumbering claims that follow the canceled claims.

A solicitor of patents should have the ability to analyze and draw distinctions, and ingenuity in expressing distinctions well. Broad distinctions should be broadly stated. However, even narrow or minor distinctions may be broadly stated, i. e., without including unnecessary or extraneous matter.

AMENDMENTS.

In canceling, amending and arguing, try to avoid unnecessary limiting admissions, such as may create estoppels. When canceling claims, the statement may be made that they are withdrawn for presentation in better form, or in view of the allowance of other claims covering the same feature; or that they are withdrawn without acquiescence in the examiner's holding or reasoning; or that in reducing the number of claims the applicant has not intended to relinquish his claim to any feature theretofore claimed.

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All of the features specified in a claim should be described in the specification. If during the prosecution of a case, the claims are amended by inserting limitations, amend the specification, if necessary, by incorporating therein terminology or phraseology used in the amended claims.

After references are cited, compare the references and the applicant's structure to discover the *general* and *specific* differences—

(a) as to structure—
having reference to —
shape
location of parts
horizontal, vertical
or inclined position
cost of manufacture
number of parts
ease in machining
portability, etc.

(b) as to operation—
having reference to—
convenience
rapidity
quantity of output
new functions
new order of operations
new product
new raw materials, etc.

(c) as to purpose—
having regard to remoteness
of references, and to the
practical environment of
applicant's invention.

The primary object of such a comparison should be to insure that all claims of every nature to which the inventor is possibly entitled are *presented*. The solicitor's duty is not performed until he has given the Office an opportunity to pass on all phases of the invention. Whether the claims should be insisted upon, if rejected, is another matter, and should not ordinarily determine

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as to the presentation of the claims. Nor does it usually matter that the Office may require division if certain claims are presented.

When preparing an amendment which it is supposed will lead to formal allowance of the application, the application should be reviewed to determine whether a supplemental oath is needed, whether the statement of objects corresponds with the claims then standing in the case, and whether any portion of the description and drawings should be canceled in view of the relinquishment of claims to any features. If the application is not reviewed before allowance as above suggested, it should be reviewed as soon as notice of allowance is received, and any necessary amendment should be made under Rule 78.

Inasmuch as a certain percentage of patents are issued with errors traceable to the Government printer or the clerks in the examining divisions, in important cases it is advisable, before paying the final fee, to make sure that the clerk has correctly entered all amendments. The Office copy of the application may be sent to a Washington associate for comparison with the Patent Office file. All patents should be compared with the application files, and errors of any consequence corrected by means of a certificate of correction or by reissue.

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MUNITIONS PATENT BOARD SERVING TWO DEPARTMENTS.

(Reprinted from *The Official U. S. Bulletin* of October 19, 1918.)

The War Department authorizes the following:

For the purpose of coördinating the policies of the War Department and the Navy Department in patent matters, the Secretary of War and the Secretary of the Navy have established the Munitions Patent Board. The membership of this board consists of the Hon. Thomas Ewing, who has been jointly selected by the Secretary of War and the Secretary of the Navy; Max Thelen, the representative of the War Department, and Pickens Neagle, representing the Navy Department.

The Munitions Patent Board has been formed to consider clauses in contracts of the respective departments dealing with patents; questions as to the validity or infringement of patents and the patentability of inventions; questions as to the amount of compensation to be paid for patents or for the use of patents; and all other miscellaneous questions as to patents which may arise in the two departments interested. The board is empowered to recommend, from time to time, to the Secretary of War and the Secretary of the Navy suitable action to be taken or policies to be adopted in regard to all patent matters which are brought before it for consideration. The action of the board in matters which come before it so far as they apply to the War Department is subject to the final approval of the Secretary of War, and in matters for the Navy is subject to the final approval of the Secretary of the Navy.

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DECEPTIVE CHEMICAL PATENTS.

New York, October 22d, 1918.

To the Editor:

A quotation from a book called "Science and the Nation" published by the Cambridge University Press, of 1917, in reference to German patents, may be of timely and perhaps of future interest to your readers. The quotation is found on pages 17 and 18 of the book.

> The Bayer Company, like all the other German fine chemical firms, holds many thousands of carefully drawn up patents; these constitute a valuable asset with which to fight competitors and to conceal actual methods of working. For it must be understood that many of these patents are bogus, that is to say, contain deliberate misstatements for the purpose of misleading enquiring minds as to the manner in which imporant products are manufactured by the firm. In fact, some German patents are drawn up for the purpose of discouraging investigation by more practical methods; thus, anyone who attempted to repeat the method for manufacturing a dye-stuff protected Salzmann and Kruger in the German Patent No. 12,096 would be pretty certain to kill himself during the operation. Commercial organizations which have reached such a stage of development as can produce adornments like the above will not suffer much from the kind of competition which we are at present preparing to offer.

This is not an isolated complaint of this kind as the newspapers in the United States have from time to time contained references to the effect that the working formulae given in many of the United States chemical patents taken out by Germans were unworkable. If this is true of a large number of German chemical patents where issued in the United States, England, or elsewhere, would it not tend to weaken the force of such patents either as references or anticipations when cited against United States applications or against United States patents?

We should be glad to know how general complaints of this kind have been.

Yours very truly,

MOCK & BLUM.

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RULES 28 AND 29.

By CHAS. E. TULLAR, Examiner.

(Delivered before the fourth assistant examiners.)

RULE 28.

Joint inventors are entitled to a joint patent; neither of them can obtain a patent for an invention jointly invented by them independent inventors of distinct and independent improvements in the same machine can not obtain a joint patent for their separate inventions. The fact that one person furnishes the capital and another makes the invention does not entitle them to make an application as joint inventors; but in such case they may become joint patentees, upon the conditions prescribed in Rule 26.

Only an original inventor is protected under the Constitution (Art. 1, Sec. 8). A patent must be founded upon the right of the inventor and no concession on the part of the original inventor can make any one else an inventor. (Tyler *v.* Kelch, 98 O. G., 1282; 1902 C. D., 506, App. D. C.) Section 4888 of the Revised Statutes requires the application to be made by the personality of the source of the inventive act, whether that personality reside in one or several individuals. A patent being a contract and mutual assent to its terms being of the essence of a contract, in the absence of such assent on the part of all joint inventors no valid patent can be issued. An application signed by one of the inventors alleging that he and another are joint inventors will therefore not be accepted even for the purpose of an interference with a patent alleged to have been improperly obtained by the other on his application as a sole inventor. (*Ex parte* Schaeffer 76 O. G., 1118; 1896 C. D., 30; *in re* Crane, 106 O. G., 999; 1903 C. D., 322.)

There is one case holding that a patent granted to the assignee of two joint applicants therefor as joint inventors is valid although one was a sole inventor. (De Laski & Thropp C. W. T. Co. *v.* Wm. R. Thropp & Sons Co., 218 Fed., 458, D. C. N. J.) The basis of the holding is that Section 4895 of the Revised Statutes permits the granting of a patent to the assignee of "the inventor or dis-

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coverer" and the mere joining of the other assignor cannot invalidate the assignment. The Office, however, has always held that an application cannot be made by one joint inventor upon the assignment of the other, all concerned in the invention being required to join in the application. (Newton's Case 2 Op. Atty. Gen. 571; 1833.)

It is not essential that both parties sign the same papers. The law merely requires that the inventor shall sign and make oath to the application. Where joint inventors sign and file separate duplicate papers reciting that they are joint inventors, a single copy of the specification should be substituted by amendment for the convenience of the Office. This amendment may be made by the attorney. (*Ex parte* Wellman *et al.*, 88 O. G., 2065; 1899 C. D., 176.)

Where in a joint application the parties allege that they "verily believe themselves to be the original, first and sole inventors" a new oath should be required. If each made the invention separately, they are not entitled to a joint patent. (*Ex parte* Cole, 105 O. G., 744; 1903 C. D., 237.)

Even though the applicants agree that a joint application has been filed by mistake, the joint application cannot be changed to a sole application. (*Ex parte* Erne *et al.*, 81 O. G., 2247; 1897 C. D., 197.) Joint inventors constitute a different entity from either of them alone and a joint application is not a constructive reduction to practice by either inventor. (*Ex parte* Weil *et al.*, 173 O. G., 1081; 1911 C. D., 249.)

A fee forming part of a complete sole application cannot be transferred to a subsequent joint application upon the applicant discovering that in law he is not a sole but joint inventor. (*Ex parte* Olsen, 101 O. G., 2079; 1902 C. D., 432.) Where, however, there is such inconsistency in the statements of the various papers of an application that it is impossible to determine who is the inventor it is not forwarded for examination and the fee may be transferred to a new application. (*Ex parte* Henze, 90 O. G., 2507; 1900 C. D., 44.)

Where a joint application is filed and later one of the inventors finds that the invention was a sole invention he is not estopped by reason of his oath in the joint applica-

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tion from filing a sole application. He may determine his rights by an interference since if the invention was a sole invention the joint applicants never made it and the sole applicant is the prior inventor. (Kohler *v.* Kohler *et al.*, 43 O. G., 247; 1888 C. D., 19.) An interference may likewise be declared between a patent issued to joint inventors and a sole application subsequently filed by one of them for the same invention. (Lovrien *v.* Banister *et al.*, 18 O. G., 299; 1880 C. D., 152.) The presumption is against the party filing the second application as a sole inventor and he must show clearly and conclusively to the Office that he was in error and misled when he made the oath to joint ownership. (Shaw *v.* Keith *et al.*, 9 O. G., 641; 1876 C. D., 69.) The right of the sole applicant to a patent, where the testimony is conclusively in his favor, will not be precluded by the mere denial of his copatentee of the fact of sole invention. (Lovrien *v.* Banister *et al., supra.*)

In an interference proceeding a sole applicant may rely upon a previously filed joint application for evidence of conception. (General Electric Co. *et al. v.* Steinberger, 208 Fed., 699, D. C. E. D. N. Y.)

Where joint inventors constitute the junior party to an interference they must establish that they jointly conceived the invention sufficiently early to overcome the *prima facie* case of the senior party. (Mills *et al. v.* Darlington, 178 O. G., 321; 1912 C. D., 460.) Furthermore, being an entity in contemplation of law, their unsupported testimony as to their joint acts of invention has no more force and effect than the unsupported testimony of a sole inventor as to his sole acts of invention. (Garrels *et al. v.* Freeman, 103 O. G., 1683; 1903 C. D., 542, App. D. C.)

One of two joint applicants will be permitted to prosecute an application through an attorney of his own selection where there is a proper showing of an endeavor of the co-applicant to cause abandonment of the application. (*Ex parte* Barrett *et al.*, 127 O. G., 847; 1907 C. D., 76.)

In considering whether an invention is joint or sole one must distinguish the idea of securing a desired result from the idea of means to secure it. Where, for example, F has merely an idea that a lifting jack might be adapted

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to horizontal operation to assist in unscrewing the pipe sections of oil well apparatus and goes to B, who works out means to adapt the jack to the purpose, the invention is B's and a patent granted to F is invalid. (Forgee *v.* Oil Well Supply Co., 58 Fed., 871, C. C. A. 3rd Cir.) Where, however, one person has a plan and preconceived design of a machine, another person may make a valuable suggestion as to an auxiliary part that aids in the accomplishment of the desired result without being a joint inventor. (Agawam *v.* Jordan, 74 U. S., 583.) But where the other makes a suggestion of practical value in making a device operative, and that suggestion is the very thing needed to make the conception a success, the invention is joint. (Consolidated Bunging Apparatus Co. *v.* Woerle, 38 O. G., 1015; 1887 C. D., 209; 29 Fed., 449, C. C. N. D. Ill.) It is not required that the inventive conceptions of the two inventors shall develop simultaneously. One may conceive a general or imperfect outline of an entirely novel thing, which, without the conception of another supplementing and complementing the conception of the first, developing it and giving it body, might never amount to invention. (William R. Thropp & Sons Co. *v.* De Laski & Thropp Circular Woven Tire Co., 226 Fed., 941, C. C. A. 3rd Cir.)

If a claim covered but a single idea, it would be difficult to see how it could constitute a joint invention, but when a claim covers a series of steps or a number of elements in combination the invention may be joint, though some of the steps or some of the elements may come as the thought of but one. (Quincey Mining Co. *v.* Krause, 151 Fed., 1012, C. C. A. 6th Cir.) This follows obviously from the fact that a combination of elements or a process comprising a series of acts may be new and unobvious even though the elements or separate acts are all old.

As patents are founded solely upon statutes they are not valid unless complying substantially with the provisions of the statutes. By the terms of the statutes it is open to any one to show that the applicants were not the original and first inventors. A patent granted to parties as joint inventors where the invention is the sole invention of one of them is void. (De Laval Separator Co. *v.* Vermont Farm Machine Co., 126 Fed., 536, C. C. Vt.) It is,

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however, always difficult to determine how much of the successful result is due to each and the mere fact that two or more persons unite in an application for a patent as the product of their joint efforts creates a strong presumption that the device is the result of their united ingenuity. (Consolidated Bunging Apparatus Company *v.* Woerle, *supra.*)

To destroy a patent granted for a joint invention, upon the ground that it was the invention of only one of the applicants, would require very clear evidence of a reliable character. (Quincey Mining Co. *v.* Krause *et al., supra.*) Such defenses are purely technical and not favored and the proof must be unquestioned and well founded. (Priestly *v.* Montague, 47 Fed., 650. C. C. E. D. Penn.)

Where several independent inventions are claimed in a patent only the claims covering a joint invention are void in a patent issued to a sole inventor and *vice versa.* The remaining claims are valid. (Eastern Paper Bag Co. *v.* Continental Paper Bag Co., 142 Fed., 479; C. C. Me.) If, however, some of the claims of a joint patent covered one element of a machine and the other claims another element and these parts of the machine were independent in construction and operation, and invented by different inventers, the patent would be void. (Potter *v.* Wilson, 2 Fish., 102; Fed. Cas. No. 11, 342.)

RULE 29.

No person otherwise entitled thereto shall be debarred from receiving a patent for his invention or discovery by reason of its having been first patented or caused to be patented by the inventor or his legal representatives or assigns in a foreign country, unless the application for said foreign patent was filed more than twelve months prior to the filing of the application in this country, in which case no patent shall be granted in this country.

An application for patent filed in this country by any person who has previously regularly filed an application for a patent for the same invention or discovery in a foreign country which, by treaty, convention, or law, affords similar privileges to citizens of the United States shall have the same force and effect as the same application would have if filed in this country on the date on which the application for patent for the same invention or discovery was first filed in such foreign country, provided the application in this country is filed within twelve months from the earliest date on which any such foreign application was filed; but no patent shall be granted upon such application if the invention or discovery has been patented or de-

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scribed in a printed publication in this or any foreign country, or has been in public use or on sale in this country, for more than two years prior to the date of filing in this country.

History of Section 4887:

The earliest legislation on the subject of foreign patents is found in Section 8 of the Act of 1836, which provided that nothing in the act should be

construed to deprive an original and true inventor of the right to a patent for his invention, by reason of his having previously taken out letters patent tehrefor in a foreign country, and the same having been published, at any time within six months next preceding the filing of his specifications and drawings.

By Section 6 of the Act of 1839 two other conditions were made, as follows:

Provided that the same shall not have been introduced into public and common use in the United States, prior to the application for such patent; and provided also, that in all cases every such patent shall be limited to the term of fourteen years from the date or publication of such foreign letters patent.

This was the state of the law when the Act of 1870 was passed, the twenty-fifth section of which became Section 4887, Revised Statutes, which prior to the Act of March 3, 1897, read as follows:

No person shall be debarred from receiving a patent for his invention or discovery, nor shall any patent be declared invalid, by reason of its having been first patented or caused to be patented in a foreign country, unless the same has been introduced into public use in the United States for more than two years prior to the application. But every patent granted for an invention which has been previously patented in a foreign country shall be so limited as to expire at the same time with the foreign patent, or, if there be more than one, at the same time with the one having the shortest term, and in no case shall it be in force more than seventeen years.

The Act of March 3, 1897, which took effect January 1, 1898, did away with the provision of Section 4887 limiting the term of the United States patent by that of a foreign patent, and provided instead that the granting of a foreign patent should bar a patent in this country if the foreign application therefor was filed more than seven months prior to the application in this country. This act amended Section 4886 also, providing that patenting the invention in any country more than two years prior to the application in this country should bar a patent in this country.

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Inasmuch as the Act of March 3, 1897, did not apply to applications filed prior to January 1, 1898, or patents to be granted thereon, old Section 4887, as it stood prior to that act, is still in force as to those applications and patents. (Cameron Septic Tank Co. *v.* City of Knoxville, 187 O. G., 232; 1913 C. D., 509; 227 U. S., 509.)

The Act of March 3, 1903, which took effect at once, and produced Section 4887 in its present form, was passed for the purpose of putting into statutory form the agreements of certain international conventions. This act did not apply to applications filed in this country before the passage of the act, but did apply with full force and effect to all applications filed thereafter. (De Ferranti *v.* Lindmark, 134 O. G., 515; 1908 C. D., 353; 30 App. D. C., 417.)

International Conventions:

The rapidly extending scope of international commercial relations and the great differences between the patent laws of different countries made an international understanding on the subject of patent protection necessary to the proper protection of industrial property. The International Convention for the Protection of Industrial Property, by which term patents and trade-marks are especially indicated, is the result of a series of conventions or treaties, of which the first was held at Vienna in 1873. Conventions followed from time to time, the more important of which were the treaty of Paris, March 20, 1883, proclaimed by the President of the United States on June 11, 1887, 39 O. G., 960, and the treaty of Brussels, Dec. 14, 1900, proclaimed by the President on August 25, 1902, 101 O. G., 1372. The convention was again revised at Washington, June 2, 1911, 204 O. G., 1011.

The purpose of the Act of March 3, 1903, amending Section 4887 was particularly to give effect to the provisions of Article 4 of the Treaty of Brussels, which had been held not to be self executing. (Op. Atty. Gen. Miller, 47 O. G., 398; 1889 C. D., 253; Rosseau *v.* Brown, 104 O. G., 1120; 1903 C. D., 587; 21 App. D. C., 73; Cameron Septic Tank Co. *v.* Knoxville, 187 O. G., 232; 1913 C. D., 509; 227 U. S., 39.) This article established a "period of priority" of twelve months. The purpose of this period

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is to give an opportunity to determine whether there is a foreign market for the invention before incurring the expense of filing foreign applications. The provision is of great benefit to citizens of the United States for the reason that the laws of many foreign countries provide that the introduction of the invention before an application is filed will bar a patent. Moreover, in many foreign countries, publishing a description of the invention in any country before filing the application will bar a patent. Under the provisions of the International Convention an application filed in this country, for example, on a certain day has, during the period of priority, the same saving effect as regards acts done in exploiting the invention, that it would have if filed on the same day in each of the countries adhering to the convention.

The period of priority established by the convention being twelve months made it necessary to change the seven months' bar established by the Act of March 3, 1897, to twelve months and this also was accordingly done by the Act of March 3, 1903.

In addition to the International Convention, with a central bureau conducted by the Government of the Swiss Confederation, there is an International Congress of American States with a central bureau conducted by the Government of Argentine Republic. The ratification of the Fourth International Congress of American States was proclaimed by the President July 29, 1914, 207 O. G., 935.

Section 4887:

It will be noted that Section 4887, and likewise Rule 29 which is based thereupon, is composed of two paragraphs. The first paragraph has to do with the *effect as a bar* to a valid patent in this country of causing an invention to be patented in a foreign country before filing an application in this country for the same invention. The second paragraph has to do with the *benefits* to be derived from applications filed in foreign countries which by treaty, convention, or law afford similar privileges to citizens of the United States.

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Section 4887 as a bar:

Considering first the effect of a foreign patent as a bar, and noting that it makes no difference what privileges the foreign country affords citizens of the United States, it is seen that to bar or render invalid a patent in this country four conditions must be fulfilled:

1. The patent must have been *granted* in the foreign country first, that is, before one is granted in this country.
2. The patent must have been caused to be granted by the *inventor, his legal representatives or assigns.*
3. The application therefor must have been *filed* more than *twelve months before the date of filing in this country.*
4. The patent must be for the *same invention.*

These four conditions will be taken up in the order given before proceeding to the subject of the benefits to be derived from foreign applications.

1. Meaning of the term *"patented"*.

The word "patented" does not have the same meaning in Section 4887 that it has in Section 4886. A foreign patent to one inventor to act as a bar to a patent to another inventor under Section 4886 must be a public patent as distinguished from a secret patent, although it is not essential that the description and claims be printed. (Brooks *v.* Norcross, 2 Fish., 661; Fed. Cas. No. 1957; Roschach *v.* Walker, 88 O. G., 1333; 1899 C. D., 157; Sirocco Engineering Co. *v.* B. F. Sturtevant Co., 213 O. G., 1447; 1915 C. D., 194; 220 Fed., 137, C. C. A. 2nd Cir.) Under Section 4887, however, the determining factor is not the date on which the invention was accessible to the public, but the date from which the inventor may have enjoyed the benefit of the foreign patent as a patent. (De Florez *et al. v.* Raynolds *et al.*, 17 O. G., 503; 1880 C. D., 289; 8 Fed., 834, C. C.) The question of secrecy or publicity of a foreign patent granted prior to the patent here is therefore immaterial under Section 4887. (Gramme Electrical Co. *v.* The Arnoux & Hochausen Electric Co. *et al.*, 25 O. G., 193; 1883 C. D., 418; 17 Fed., 838, C. C.) The last two decisions were rendered under Section 4887 as it stood prior to the Act of March 3, 1897, when it provided that the patent in this country should expire

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with the foreign patent, for the same invention, having the shortest term. The object of the old statute was to provide that when an inventor had secured a monopoly in a foreign country by taking out a patent therein, in addition to the monopoly he had secured here, and the monopoly terminated by expiration of the patent there, the invention should also be free to the people of this country. (Leeds & Catlin Co. *v.* Victor Talking Machine Co. *et al.*, 144 O. G., 1089; 1909 C. D., 536; 213 U. S., 301.) The Board of Examiners-in-Chief has held in a case decided February 13, 1918, Vol. 37, page 113, that the same general object is intended to be accomplished by the statute as it now stands.

The actual issuance of the patent under the seal of the Government, investing the patentee with the grant of a monopoly, rather than the preliminary proceedings, is contemplated by the term "patented". (Telephone Co. *v.* Cushman *et al.*, 65 O. G., 135; 1893 C. D., 546; 57 Fed., 842, C. C.) The patent under consideration in this case was a British patent.

The "patented" date of a French patent is the "délivré" date. (Sirocco Engineering Co. *v.* B. F. Sturtevant, *supra.*)

The "patented" date of a German patent is the "ausgegeben" date. (Merrell-Soule Co. *v.* Powdered Milk Co. of America, 222 Fed., 911; C. C. A. 2nd Cir., Coxe, Judge.)

A provisional Swiss patent which merely secures the applicant against the effects of a publication for three years and entitles him to no monopoly, but merely to a definitive patent upon the making of proof of the existence of either the article itself or a model within that time is not a grant of a patent monopoly. (Societe Anonyme, etc., *v.* General Electric Co., 97 Fed., 604; C. C. S. D. N. Y.)

When a foreign patent shows upon its face that it was issued at a certain date the burden is upon the applicant to show that it is not in fact entitled to that date. (Hummel *v.* Tingley, 90 O. G., 959; 1900 C. D., 22.)

Under Section 893, Revised Statutes, this office must take judicial notice of foreign patents where copies have been furnished it by foreign governments and they are among the records of the Office. (Robin *v.* Muller *et al.*, 108 O. G., 292; 1904 C. D., 14.)

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2. By whom patented.

Under the terms of the statute the granting of a foreign patent on an application filed more than twelve months before the application in this country will not bar a patent in this country unless the foreign patent is procured by the applicant in this country or by his legal representatives or assigns.

While a sole application stands on its own ground, independent of and hostile to any previously filed joint application in this country, yet, if the invention has been patented to the joint applicants in a foreign country, it has been "caused to be patented" by the sole applicant, within the meaning of the statute, and a sole patent in this country is barred. (American Casting Mach. Co. *v.* Pittsburgh Coal Washer Co., 237 O. G., 621; 1917 C. D.; 237 Fed., 590.)

Where an applicant in this country is rejected on a foreign patent for the same invention issued to a different party, and the foreign patent bears evidence of having been filed on a certain date, the mere fact that the applicant in this country has referred in his oath to the filing of a foreign application on that date is not sufficient to identify the patent as his own. The reference will not be withdrawn until the applicant files an affidavit fully identifying the patent as his own or filed on his behalf. (*Ex parte* Wlost, 165 O. G., 729; 1911 C. D., 57.)

3. On an application *filed more* than *twelve months before the application in this country.*

In computing the time under Section 4887 the date of filing the foreign application is excluded, so that if, for example, the foreign application was filed February 23, 1903, the application in this country may be filed as late as February 23, 1904. (Hess-Bright Mfg. Co. *et al. v.* Standard Roller Bearing Co., 147 O. G., 521; 1909 C. D., 256; 171 Fed., 114, C. C. E. D. Penn.)

The bar of the statute begins to run from the filing of a British provisional specification which ripens into a patent. (*In re* Swinburne, 99 O. G., 1625; 1902 C. D., 537; 19 App. D. C., 565.) Ths rule has been reaffirmed by the Court of Appeals in *in re* Bastian *et al.*, 225 O. G., 1106; 1916 C. D., 160; 44 App. D. C., 425, without regard

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to a contention that the provisional application did not disclose the invention. Where, however, the British provisional specification has been cancelled *under a provision of the British law* because for an invention not substantially the same as that described in the complete specification, and the patent bears the date of the complete specification, then the date of filing the complete specification must be accepted as the filing date under Section 4887. (*Ex parte* Hayes, 209 O. G., 1317; 1914 C. D., 93.)

Section 4894, Revised Statutes, applies only to applications which already have a status in the Office and a showing of unavoidable delay cannot be made under that statute to excuse a failure to file an application in this country within the twelve months specified in Section 4887, Revised Statutes. (*Ex parte* Ravelli, 130 O. G., 982; 1907 C. D., 260.)

It was formerly held that application papers executed by the inventor could not be substituted for application papers executed by the attorney for the purpose of giving a date to the application early enough to avoid the statutory bar under Section 4887. (*Ex parte* Tropenas, 90 O. G., 749; 1900 C. D., 14; *ex parte* Sassin, 122 O. G., 2064; 1906 C. D., 205.) In order to meet the emergency arising out of the war the practice of accepting applications executed by the attorney was instituted, leaving to the courts the question whether properly executed applications, subsequently filed, can operate by relation back to the date of filing by the attorney. (*Ex parte* Kramer, 238 O. G., 986, 1917 C. D.)

Under Section 10a of the Trading with the Enemy Act of October 6, 1917 (243 O. G., 1070), an enemy or ally of enemy who is unable, during the war or within six months thereafter, on account of conditions arising out of the war, to file an application within the period prescribed by law, may be granted an extension of nine months, provided the nation of which the applicant is a citizen or subject extends similar privileges to citizens of the United States.

Under Rule 63(f), applications filed more than twelve months after the filing of an application for the same invention in a foreign country, are made special in an endeavor to get the patents granted before a statutory bar arises by reason of the granting of the foreign patents.

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4. Meaning of same invention.

Nothing is "patented" unless it is not only described but actually covered by the claims. (Westinghouse Electric & Mfg. Co. *v.* Stanley Instrument Co., 138 Fed., 823, C. C. A., 1st Cir., Putnam, Judge.) The word patented means patented according to the laws and usages of the country provided a substantial monopoly is thereby granted. It is not essential that the foreign patent be the equivalent of a patent granted by the United States either as to length of term or the scope of the protection secured. (Atlas Glass Co. *v.* Simonds Mfg. Co. *et al.*, 102 Fed., 643, C. C. A., 3rd Cir., Gray, Judge.)

Formal identity of claims is not necessary to constitute identity of a United States and a foreign patent under Section 4887. Substantial identity of the invention as covered by the claims is sufficient. (United Shoe Machinery Co. *v.* Duplessis Machinery Co., 148 Fed., 31, C. C. Mass.) According to this case the test of identity of the subject matter patented is whether in either patent there is evidence of "an essential, novel, and patentable improvement on what is claimed in the other". On appeal this test was approved. (155 Fed., 842., C. C. A., 1st Cir.)

In Thomson-Houston Electric Co. *v.* McLean, 153 Fed., 883, C. C. A., 1st Cir., Putnam, Judge, it is held that a patent is not exempted from the operation of Section 4887, Revised Statutes, because there may be differences in detail between the devices of the two patents unless such differences affect the essence of the invention as covered by the respective patents. The decision clearly indicates that the test is as to whether the differences are patentable differences.

According to the Supreme Court the question of whether an invention has been "patented" within the meaning of Section 4887 is one of identity between the invention claimed in the United States and foreign patents and not whether one would anticipate or overlap the other. (Fireball Gas Tank & Illuminating Company *et al. v.* Commercial Acetylene Company *et al.*, 221 O. G., 1039; 1915 C. D., 341; 239 U. S., 156.) The foreign patents were held to be for a monopoly of the method of storing or utilizing gas, while the patent in this country was held to be for a

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different monopoly, namely, an apparatus by which the process was practiced. This difference between the claims being granted, it is clear that the holding was right. The apparatus comprised a pressure reducing valve whereby the pressure of the outflowing gas was kept constant, this reducing valve being claimed in the United States patent both broadly and specifically. Quite clearly other means might have been used to control the pressure. If it is not so easy to follow the court in its construction of some of the claims of the foreign patents, this is due to the indefinite character of those claims, when viewed as we should view such claims if urged in this country.

In the case of Leeds & Catlin Co. *v.* Victor Talking Mach. Co. *et al.*, 144 O. G., 1089; 1909 C. D., 536; 213 U. S., 301, the Supreme Court held that a claim for a process and a claim for an apparatus by which the process is performed are distinct inventions.

In the case last cited the Supreme Court held also that a combination and an element thereof are distinct inventions.

Where a foreign patent contains no formal claims, it will be presumed that the law of the country does not require them, and the specification and drawings will be looked to for the purpose of determining whatever is novel and whether it will sustain any of the claims in the application in this country. (Western Electric Co. *v.* Citizens Tel. Co. *et al.*, 106 Fed., 215, C. C. W. D. Mich. S. D.)

A German Gebrauchmuster, although not printed, the title and general description of the invention only being given in the official publication, is a foreign "patent" within the meaning of Section 4887. (Safety Gas Lighter Co. *v.* Fischer Bros. & Corwin, 236 Fed., 955.)

Some of the claims of an application in this country may be subject to rejection as being for the same invention as is covered in the foreign patent without subjecting the remaining claims to the same rejection. This may occur, for example, where the application in this country covers both a combination and an element thereof, while the foreign patent claims the element only. (Leeds & Catlin Co. *v.* Victor Talking Mach. Co. *et al.*, *supra.*)

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Section 4887 as a benefit:

Considering now the benefit that an applicant in this country may obtain from a previously filed application in a foreign country one observes that the filing of the foreign application will have the same force and effect as the same application would have if filed in this country on the same day provided four conditions are fufilled.

1. The foreign country must by treaty, convention, or law, afford similar privileges to citizens of the United States.
2. The foreign and domestic applications must be filed by the same person.
3. The application in this country must have been filed within twelve months of the earliest date on which any such foreign application was filed.
4. The two applications must be for the same invention.

These four conditions will be taken up in order.

1. The foreign country must by treaty, convention, or law, afford the privileges required by Section 4887 to citizens of the United States.

The benefit of the filing date of a foreign application cannot be obtained where the foreign country does not adhere to the International Convention until after the filing of the application in this country. (Winter *et al. v.* Latour, 157 O. G., 209; 1910 C. D., 408; 35 App. D. C., 415.)

When the Interior Department is duly advised that a foreign country has adhered to the International Convention the Office is warranted in assuming that "similar privileges" are afforded United States citizens and the burden is upon any one to show the contrary. (National Metallurgic Co. *v.* Whitman *et al.*, 156 O. G., 1068; 1910 C. D., 405; 35 App. D. C., 420; Winter *et al. v.* Latour, *supra.*)

Judicial notice will not be taken of the laws of a foreign country. (Winter *et al. v.* Latour, *supra.*)

2. The foreign and domestic applications must have been filed by the same person.

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Where the laws of a foreign country do not require the application to be filed by the inventor in person it is sufficient to show that the foreign application was filed by others for his benefit. (*Ex parte* Barthels, 179 O. G., 574; 1912 C. D., 171.)

3. The application in this country must have been filed within twelve months of the *earliest* date on which *any* such foreign application was filed.

When construing this statute as amended March 3, 1903, one must remember that before the act of that date no benefit whatever could be derived from the filing date of a foreign application. Nothing back of the patented or published date was competent evidence on priority of invention. (Rousseau *v.* Brown, 104 O. G., 1120; 1903 C. D., 587; 21 App. D. C., 73.) An applicant therefore receives the benefit of the date of his foreign application if he complies with the conditions of the statute and then only.

Under the terms of the statute no benefit can be derived from the filing date of any foreign application filed more than twelve months before the application in this country, and not only this, but if there be any such foreign application no benefit can accrue from the filing of *other* applications *within* the twelve months' period, for the reason that the application in this country would not then have been "filed within twelve months * * * from the *earliest* date on which any such foreign application was filed." (There appears to be no case on this point.)

The fact that a foreign application filed within the requirements of Section 4887 becomes abandoned after the application is filed in this country does not lessen its effect as a constructive reduction to practice, since if it had been filed in this country it would have entitled the applicant to a patent, and the foreign application must be given the same force and effect. (National Metallurgic Company *v.* Whitman *et al.*, 156 O. G., 1068; 1910 C. D., 405; 35 App. D. C., 420.)

4. The foreign and domestic applications must be for the same invention.

The test for identity of invention under the second paragraph of Section 4887 would appear to be whether

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the foreign application discloses the idea of means claimed in the application in this country. The question of what is claimed in the foreign application does not appear to have been considered in any published decision.

In the case of Bissell *v.* Fottinger, 212 O. G., 689; 1915 C. D., 76; 42 App. D. C., 597, there was some question as whether the invention was sufficiently disclosed in the original application filed by F. in Germany. An amended specification and drawings were filed fully disclosing the invention and a patent was granted by the German Patent Office. The application in this country was filed within twelve months from the date of filing the original application in Germany, and the applicant was given the date of his *amendment* to the German application for a constructive reduction to practice.

Proof of Foreign Application:

The benefit of the date of a foreign application filed under the International Convention can only be secured by proving such foreign application. (*Ex parte* Pauling, 115 O. G., 1848; 1905 C. D., 131.)

Where the benefit of a foreign filing date is relied upon to overcome a reference, the affidavit under Rule 75 "should be accompanied by a copy of the original foreign application, certified to by the Patent Office of the country in which it was filed, and if it is not in the English language, a sworn translation of the same or a translation made by the official translator of this office. If the application was not made by the inventor himself, applicant's affidavit should also state that the application in the foreign country was filed for his benefit and that such procedure is in accordance with the procedure in the foreign country." (*Ex parte* Bartels, 179 O. G., 574; 1912 C. D., 171.)

Even where a party secures for his application here the benefit of the filing date of a foreign application the actual filing date in this country must appear and cannot be changed to the foreign filing date. (*Ex parte* Pauling, 115 O. G., 1848; 1905 C. D., 131.)

Where an application is involved in interference, the primary examiner prepares the notices of interference in accordance with the filing dates of the applications in this

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country. If the applicant has in his original oath acknowledged the filing of an application for the same invention in a foreign country, the Examiner of Interferences upon the filing of a proper motion, accompanied by a certified copy of the foreign application, will give the party filing the same the benefit of the foreign application if in his opinion the invention in issue is disclosed therein. If, however, the original oath does not acknowledge the foreign application, but the allegation is made in a subsequent oath or in the preliminary statement, the applicant will, in view of the conflicting affidavits, be given the benefit of the filing of the foreign application only upon a stipulation of the parties, or where it is established by duly taken testimony that he was in fact the party who filed the foreign application or that it was filed with his knowledge and consent. (Steel *et al. v.* Myers, 205 O. G., 1021; 1914 C. D., 74.)

Last clause of Section 4887:

Section 4886, Revised Statutes, provides that a valid patent can be obtained only where the invention is not patented or described in a printed publication in any country, or put into public use or on sale in this country, more than two years prior to the application in this country. The last clause of Section 4887 is intended to prevent this section, as amended March 3, 1903, from being construed to extend the two year period permitted by Section 4886 prior to the filing in this country.

In considering questions as to the time of filing in this country it must always be remembered that a divisional case relates back to the time of filing the parent case.

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RULE 20.

By H. C. ARMSTRONG, Examiner.

In the commentary on Rule 20 published in the September Journal reference is made on page 38 to two decisions, *ex parte* Hertford and *ex parte* McTammany, which have been modified in certain respects by later decisions to which it may be well to direct attention.

In *ex parte* Hertford the question under consideration was the entry of an "associate" power of attorney signed by the equitable assignee who stated that he desired merely to inspect the application and had no intention of revoking the power of attorney given by the inventor. This was no attempt at intervention and the Commissioner very properly ordered entry as a power of inspection only, but went further and held that as the assignment was not accompanied by a request that the patent issue to the assignee, it was an equitable and not a legal assignment and therefore gave the assignee no power to intervene and appoint an attorney in any event.

The basis for this latter holding has been overruled by *ex parte* Hill & Hill, 206 O. G., 1437, in which it was decided that either an equitable or a legal assignee may intervene and prosecute the case to the exclusion of the inventor and, of course, appoint an attorney for such prosecution. The conclusion reached in Hertford was proper under either practice.

In *ex parte* McTammany where there were two conflicting assignments and the assignees presented different powers of attorney the Commissioner declined to recognize either of such powers and held that only the inventor or his attorney could prosecute the application until determination by the court of the question of title. This practice was changed by two decisions, Sparks *v.* Small, 113 O .G., 1970, and *ex parte* Wurtz, 120 O. G., 2442, holding that in all cases the earlier of two assignees should be allowed to intervene and prosecute until his assignment is set aside either by mutual consent or by a decision of a competent court.

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OF PERSONAL INTEREST.

The following persons have recently been appointed fourth assistant examiners, U. S. Patent Office:

William E. Baff, of the District of Columbia.
Emerson Stringham, of the District of Columbia.
Charles Cottingham, of Illinois.
Byron H. Carpenter, of Ohio.
Miss Louise Schwrar, of South Carolina.
Heman S. Ward, of the District of Columbia.
Frank M. Dryzer, of New York.
John J. Lynch, of New York.
William K. Gahagan, of Louisiana.
Chas. B. Hamilton, of the District of Columbia.
Miss Myrtle Whitten, of Illinois.
Lewis W. Craig, of Massachusetts.
Miss Phillis Richardson, of Michigan.
John W. Garner, of Virginia.

The following assistant examiners have recently resigned:

*S. H. Graves, first assistant.
S. J. Boughton, First Assistant Examiner of Trade-Marks.
*Charles A. Straw, second assistant.
Louis A. Bisson, second assistant.
*W. J. Eccleston, second assistant.
Ralph W. Brown, second assistant.
*Karl Lesh, second assistant.
Perley H. Plant, second assistant.
*F. N. Stone, second assistant.
*Harry A. Burgess, third assistant.
*Harold C. Thorn, third assistant.
*J. S. Petrie, third assistant.
*Clyde A. Norton, fourth assistant.
*Edward H. Lange, fourth assistant.
Simon Birnbaum, fourth assistant.
*Don Carlos Ryan, fourth assistant.
*Jacob S. Scharf, fourth assistant.
*Arthur Worischek, fourth assistant.
Henry K. King, fourth assistant.
*Frederick C. Hamer, fourth assistant.
*George G. Hyde, fourth assistant.
*A. J. Fihe, fourth assistant.
Eric A. Binney, fourth assistant.

*Entered the military or naval service.

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First Lieutenant C. A. Knudtson, formerly assistant examiner in Division 35, has recently died in France as the result of wounds received in action.

James W. Geddes, clerk in the Application Division for several years, died of pneumonia in France, October 6; he was attached to the 112th Engineers.

Vincent Cooley, a clerk in the Drafting Division, was killed in action in France the middle of October. At the time of his death he a non-commissioned officer.

Lieutenant H. R. Frazier, son of former Assistant Commissioner of Patents Robert T. Frazier, was instantly killed in action in France, October 17.

Charles F. Huntemann, first lieutenant, 80th Division, 319th Infantry, son of First Assistant Examiner H. C. Huntemann, was killed in action in France, October 10, 1918.

Mr. Sidney E. Prindle, private in the Marine Corps, was killed in action in France early in October. He was the son of Mr. Edwin J. Prindle, of New York, formerly an assistant examiner in the Patent Office.

First Lieutenant Richard Clyde Cruit, in the same division, regiment and company as Lieutenant Huntemann, was wounded, October 5, in the hip by shell fire. Before joining the Army, Lieutenant Cruit was a patent attorney with Pennie, Goldsborough and O'Neill. It is expected that he will fully recover in the course of one or two months.

The latest word received from Captain Howard W. Hodgkins, formerly of Division 41, tells of a detail gathering side-cars and motorcycles which took him and his detachment a long distance through most interesting portions of France.

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JOHN RUGGLES
Senator from Maine, 1835 to 1841

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From a portrait in oil in the State House, Augusta, Maine

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(See article on "Patent Act of 1836," Page 203)

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VOL. I. JANUARY, 1919. No. 5

EDITORIAL.

In his report for the year 1916 Commissioner Ewing said: "The Congress by withholding adequate appropriations to this office is, in effect, transferring our system into the old system of granting patents on registration, while at the same time the safeguards of a registration system necessary to the public interest are not provided."

On another page of this issue is an article dealing with the readoption of the examination system of patent grants by the enactment of 1836, after a forty-three years' trial of the registration system, that, in the opin-

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ion of Congress, revealed the unsuitability of that system to the needs of a free people. The article discloses a deliberate purpose in the minds of the framers of the law of 1836 to have the validity of the grant reasonably guaranteed by a careful examination made by a body of experts prior to the grant, and a confident expectation of the fulfillment of that prpose; to the end that the courts should be relieved of a great deal of labor, the public relieved of uncertainty with respect to their rights, and large sums of money previously expended in the unproductive labor of courts and lawyers saved for productive uses.

In a registration system the burden of claiming more than he has a right to claim is borne by the patentee, and he must be on his guard; if he claims too much the courts may invalidate his entire patent, so that all infringers of that which the patentee had a right to patent will be excused because of the patentee's greed in claiming more; whereas, in an examination system, the people undertake in advance of the grant to determine how much an applicant is entitled to, and the patentee takes no chance of loss by claiming too much, since the court will hold as infringers all who have made use of that which is defined by claims the patentee is entitled to, and merely invalidate the claims he is not justified in making. Any theory by which the Patent Office shifts onto the courts the burden of determining any questions of patentability is out of harmony with an examination system of patent grants. Whenever conditions are such that the Patent Office cannot determine patentability with reasonable efficiency it is time to inquire whether the nation shall not revert to the discredited registration method with the checks appropriate to it, rather than continue an ineffective examination system. That the fundamental distinction between the two systems, elemental as it is, is not always appreciated, is apparent from the frequently expressed advocacy of a practice whereby the Patent Office shall not refuse any claims insisted upon by an applicant, but merely print upon the patent the references thought by the Patent Office to negative a right to the claim. This advocacy has never contemplated transferring the aforesaid burden, however, from the public to the patentee under those circumstances. Even if the duty of the Patent

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Office were not made clear in the enactment of 1836 the Supreme Court has made it clear in Keystone Bridge Co. vs. Phoenix Iron Co. by this language. "Since the act of 1836 the patent laws require that an applicant for a patent * * * 'shall particularly specify and point out the part, improvement, or combination which he claims as his own invention or discovery'." This provision was inserted in the law for the purpose of relieving the courts from the duty of ascertaining the exact invention of the patentee by inference and conjecture, derived from a laborious examination of previous inventions, and a comparison thereof with that claimed by him. The duty is now cast upon the Patent Office. Thus his claim is, or is supposed to be, examined, scrutinized, limited, and made to conform to what he is entitled to.

Every person charged with the duty of granting patents ought to bear in mind this elemental distinction between a registration law and the examination law now in force, lest the application of the principles of the former to the latter prove so costly in proportion to the benefits derived as to wreck the system.

The needs of the Patent Office, so ably presented in the speech of Ex-Commissioner Ewing before the Atlantic City Conference, reported elsewhere in these columns, is a subject of continuing interest. Discussion should go on, but should soon eventuate in action. Resolutions like those adopted at the conference are distinct and encouraging signs of outside recognition of these needs, but unless used as a basis for further effort, will amount to nothing. The presentation of these needs, begun at the Atlantic City Conference and continued at the Southern Commercial Congress at Baltimore and the session of the American Economic Association at Richmond, will be extended, it is expected, to future appropriate conventions and conferences. So far, so good—but the time seems ripe for the formulation of a definite plan on which needed legislation may be based.

It is expected that a report will soon be made by the special committee of the National Research Council appointed to deal with the subject.

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Possibly the plan, or a plan, should emanate from the Patent Office officials. The Patent Office Society has for one of its objects "to further the industrial development of the United States in so far as the patent system is a factor thereof," and it would seem entirely proper for it to suggest improvements.

To be comprehensive in its features and to possess the proper solidity of support, any plan formulated ought to be approved by manufacturers and patent-bar associations. Why then should not these parties interest themselves in the determination of the question?

It is urged that all concerned do some immediate thinking on the subject to the end that something tangible may soon materialize from which to start a forward movement.

In 1860 the number of new applications filed in the Patent Office was 7,653; in 1867, shortly after the close of the Civil War, there were 21,276 new cases filed. If we are soon to experience a corresponding increase in work, obviously means must be provided to care for it.

The session of the American Economic Association held at the Hotel Jefferson in Richmond, on December 28, 1918, was attended by Bert Russell, Secretary of the Patent Office Society, who found opportunity to interest some of the delegates in the improvement of the patent system and to distribute a number of copies of the November number of the Journal.

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THE PATENT ACT OF 1836.

By WILLIAM I. WYMAN.

The patent act of 1790, which created the United States patent system, also initiated the examination method of granting patents. The Secretary of State became the keeper of the records under this law, and with the Secretary of War and the Attorney General constituted a board for the examination and grant of patents. Thomas Jefferson, the then Secretary of State, whose views mainly controlled the policy of the board, had extremely high ideals as to the standard and dignity of the grant. The act was rigorously executed, the board exercising its full discretion to the utmost, and a failure to prove the invention to be sufficiently important was ground for refusal. So vigilantly and drastically was this policy pursued that but three patents were granted the first year and only about three score for the entire life of the act. The decision of the board being final (no appeal being permitted) and the percentage of cases escaping rejection being very small, the opposition of the inventors and the industrial classes was aroused to such a degree that the act was repealed and superseded by the law of 1793.

The act of 1793 was a "registration" device, pure and simple. The act which it superseded was considered by the industrial classes to be inimical to their welfare, and the act of 1793 was passed at their instance. It copied the English system. As stated in the debate on the bill, "it was an imitation of the patent system of Great Britain; that the provisions were such as would circumscribe the duties of the deciding officer within very narrow limits". Thomas Jefferson said of this law, "Instead of refusing a patent in the first instance, as the board was formerly authorized to do, the patent now issues of course, subject to be declared void on such principles as should be established by the courts of law. * * * a previous refusal of a patent would better guard our citizens against harassment by law suits." The law of 1790 required an examination and made the grant *prima facie* evidence of validity, while under the act of 1793, patents

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were granted upon compliance with certain formalities and the attributes of the patent ascertained only by expensive litigation.

The law of 1793 gave trouble from the start. Questions of originality, duplication of patents and grant of frivolous patents became insistent. Courts were overwhelmed with litigation, and determination of infringement suits became matters of perplexity and confusion. Daniel Webster, in 1824, presented legislation to help relieve the burden of the patentees in the matter of costs in infringement cases, declaring in the course of the debate that a patent was evidence of property—that invention was the fruit of a man's brain; that industries grew in proportion to invention; that therefore the Government must aid progress by fostering the inventive genius of its citizens. As befits the largest figure of his time, he had the same views of the relation of invention to progress, the same prophetic vision, and the same desire to promote invention through perfecting the patent system, as had his notable predecessors, Franklin, Washington, Jefferson, Hamilton and Madison.

The failure of the law of 1793 to work out its designed purpose became more and more evident as the evils which arose under its application became more and more pronounced. Investigations of the Patent Office and the system, by the Secretary of State, the President and Congress, follow in almost endless succession. Finally, John Ruggles, who had recently been elected to the Senate from Maine, on December 31, 1835, moved that that body appoint a committee to take into consideraion the condition of the Patent Office and the laws relating to the issuing of patents. Senator Ruggles was appointed the chairman of the committee, which made its report on April 28, 1836, and at the same time submitted a bill for the reorganization of the Office.

Senator Ruggles, in making this report to the Senate, speaking of the practical operations of the law of 1793 and its effect upon inventors and the public, said:

"Under the act referred to, the Department of State has been going on, for more than forty years, issuing patents on every application, without any examination into the merits or novelty of the invention. And the evils which necessarily result from the law as it now exists

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must continue to increase and multiply daily until Congress shall put a stop to them. Some of them are as follows:

"1. A considerable portion of some of the patents granted are worthless and void, as conflicting and infringing upon one another, or upon public rights not subject to patent privileges, arising from either a want of due attention to the specification of claim, or from the ignorance of the patentees of the state of the arts and manufacures, and of the inventions made in other countries, and even in our own.

"2. The country becomes flooded with patent monopolies, embarassing to *bona fide* patentees, whose rights are thus invaded from all sides; and not less embarassing to the community generally, in the use of even the most common machinery and long known improvements in the arts and common manufactures of the country.

"3. Out of this interference and collision of patents and privileges, a great number of law suits arise, which are daily increasing in an alarming degree, onerous to the courts, ruinous to the parties, and injurious to society.

"4. It opens the door to frauds, which have already become extensive and serious. It is represented to the committee that it is not uncommon for persons to copy patented machines in the model room; and, having made some slight immaterial alterations, they apply in the next room for patents. There being no power to refuse them, patents are issued of course. Thus prepared, they go forth on a retailing expedition, selling out their patent rights for States, counties and townships, to those who have no means at hand of detecting the imposition, and who find, when it is too late, that they have purchased what the venders had no right to sell, and which they obtain thereby no right to use. This speculation in patent rights has become a regular business, and several hundred thousand dollars, it is estimated, are paid annually for void patents, many of which are thus fraudulently obtained.

"In this collision and interference of patents, the original and meritorious inventor sees his invention, to the perfection of which he has devoted much time and expense, pirated from him, and he must forego the reward which the law was intended to secure to him in the exclusive right it grants, or he must become involved in nu-

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merous and expensive lawsuits in distant and various sections of the country to protect and confirm his rights. If he be wise he will generally avoid the latter and submit to the former alternative of injustice, to which the Government, as the law now is, makes itself accessory. The practice is scarcely less reprehensible of taking out patents for what has long been in public use, and, what every one has, therefore, a right to use. The patentee in such cases being armed with the apparent authority of the Government, having the sanction of the highest officers, the seal of the state, scours the country, and, by threats of prosecution, compels those who are found using the thing patented to pay the patent price or commutation tribute. This exaction, unjust and iniquitous as it is, is usually submitted to.

"The extent of the evils resulting from the unrestrained and promiscuous grants of patent privileges may be imagined when it is considered that they are now issued, since this year commenced, at the rate of more than a thousand a year; a considerable portion of which are doubtless void for want of originality in the inventions patented, either in whole or in some of the parts claimed as new.

"A necessary consequence is that patents, even for new and meritorious inventions, are so much depreciated in general estimation that they are of but little value to the patentee, and the object of the patent laws, that of promoting the arts by encouragement, is in a great measure defeated.

"To prevent these evils in future is the first and most desirable object of a revision and alteration of the existing laws on this subject. The most obvious, if not the only means of effecting it, appears to be to establish a check upon granting of patents, allowing them to issue only for such inventions as are in fact new and entitled, by the merit of originality and utility, to be protected by law. The difficulty encountered in effecting this is in determining what that check shall be, in whom the power to judge of inventions before granting a patent can safely be reposed, and how its exercise can be regulated and guarded to prevent injustice, through mistake of judgment or otherwise, by which honest and meritorious inventors might suffer wrong."

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With this report before them, Congress took up and passed the bill which accompanied it, and the bill became a law on July 4, 1836.

The law restored the examination method of granting patents, established the Patent Office as a distinct and separate bureau, placed it in charge of a chief to be called the Commissioner of Patents, and provided a complete organization to make effective the American plan of predetermining the validity of the invention before the grant. Another law passed the same day provided for the erection of the original section of the present Patent Office. This was also due in great measure to Senator Ruggles' activities.

John Ruggles was born in Westboro, Mass., on October 8, 1789. He graudated from Brown University in 1813, read law in Worcester for the next two years, and moved to Skowhegan, Maine, in 1815, where he began the practice of law. In 1817, he removed to Thomaston, of that state. He became a member of the State Legislature, later was made a justice of the State Supreme Court, and finally became a member of the United States Senate, in the year 1835, serving out his term until 1841. He then resumed the practice of law in Thomaston, where he lived until his death, June 20, 1874.

While John Ruggles had a local reputation as a lawyer of marked ability and legal acumen, he failed apparently to impress his personality on a larger stage. His reputation does not ever appear to have been national, and aside from his activities in patent matters he left no heritage had a decided taste for mechanics. This is the only reason that appears for his taking such an exceedingly great interest in patent affairs as soon as he came to Washington. Nothing in his previous history or associations gives any clue for his intensive concern in the patent system, but it is evident that as soon as he could look over the ground, he immediately made that situation his closest study. Evidently, his sympathies and imagination were aroused to an acute degree, for without any encouragement in the immediate environment he was cast in he envisaged the situation almost at once, saw with a comprehending eye the deficiencies, injustices and the illogic of existing conditions, and perceived the measures required to remedy

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them in scientific perspective. He had the understanding and the enthusiasm of the pioneer and the discoverer. Offering a completely formulated and lucid plan to remedy a situation which was self-evidently intolerable, he broke down all opposing forces in marvellously short order, and in about six months after bringing in his report, the law radically changing the system was placed on the statute books. Thus, after two generations of tolerance of a bad system, and after repeated failures to remedy it, he succeeded not only in toppling over the unsightly structure, but in erecting in its place one that is bound to endure indefinitely. Except as it was made more effective by minor changes, the act of 1836 remains in larger outlines in the law of today; and except for alterations which shall more effectively carry out its purpose and principles, it will persist in the systems of the future.

While the law did not fulfill the complete hopes of its creators, it was a pronounced step in the right direction and a decided jump in advance not only of anything that had previously existed, but that had ever been proposed. It was constructive legislation in the highest sense of that abused term. It provided an organization and a mode of procedure for whech there were no precedents and presented a positive and clear cut plan for determining patent rights which was absolutely logical and complete and which in its larger outlines provided for every possible contingency. It sharply accentuated the advantages of a proper "examination" system by its vivid contrast with the signal failures of the previously existent "registration" regime. So marked was its success, so closely related to the progress of American industry, so intimately identified with and provocative of the genius of invention, that the so-called American method of granting patents became the standard practice for the whole world to emulate or admire. The only notable exception to this trend, the only highly progressive and powerful state which adheres in entirety to the old "registration" system, is France. And while there may be no necessary connection between her industrial position and her patent system, it is a fact that she has lost relatively in recent years in the international race for economic precedence. And this, in spite of the fact that no people are more ingenious, more original in conception

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or bolder in action. Even staid, conservative England has compromised and accepted partially the advantages of the examination system. The first country to be industrialized, the first to feel the impulse due to invention, the country to whom the greatest fundamental inventions of modern times are due, England had every reason to remain content with her centuries-old patent system. But she was being passed in the race by the newer industrial nations and she was compelled to alter her system in accordance with the methods which were conferring ascendency upon her competitors.

For the first time in all history the means for ascertaining and decreeing rights of property in ideas and promoting the objects of a system of patent protection was placed on an intelligent, scientific and adequate basis. Before this time, it was true that some measure of examination prior to the grant was indulged in. In Massachusetts and Connecticut, long before the revolutionary war, patents were granted by the legislative bodies after a conference with the inventor and a scrutiny of the invention, while under the act of 1790 the Federal Government did the best it could to ascertain utility and the state of the art, but the efforts in these various directions to give valid basis for the patent were spasmodic and fragmentary. No facilities, organization or body of adequate law was ever provided before this time to properly initiate and carry on the "examination" system. This act provided a means for collecting the art, a personnel sufficiently trained to examine the same intelligently, and the machinery and procedure for scientifically endeavoring to give effect to the purpose of the law. That purpose was to throw on the Office the burden which the courts had alone performed, to determine the utility, novelty and patentability of the invention when and where the patent is granted, and, as one writer puts it,—"to eliminate litigation 'before it begins.'"

Whatever incentive the registration act of 1793 gave to industry was to an appreciable degree modified by the mass of worthless and conflicting patents granted, by excessive litigation and many cases of fraud and extortion. Efforts were sometimes made to reduce the ineffectiveness of the act, to give it a semblance of strength by modifying its operation. Dr. William Thornton administered

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this act for more than half of its lifetime. Except when he undertook to apply the rules inherent in an examination system in cases notoriously without merit, the act was carried out in accordance with its intent. In such exceptional instances where Dr. Thornton attempted to interfere with the prescribed course of procedure, as when he refused to include in a patent what he knew "to be a common public right", he was summarily overruled upon appeal to the Secretary of State. The act of 1793 was therefore in its administration as effective a demonstration of the possibilities of the registration method as could be imagined.

The law of 1836 provided a dignified procedure, gave the grant a *prima facie* standing of validity, and if it did not start this country on its unprecedented industrial era, was at least the most powerful agent in stimulating inventive genius and conserving its fruits. Industrial civilization and invention are inseparable factors. One can not be comprehended without the other. The present law may be defective and the means to administer it may be inadequate, but the fundamental principles upon which it is based are sound. It only needs that it be improved in such detail as necessity indicates, to make it the effective instrument that Senator Ruggles perceived it to be for the promotion of the comforts, well-being and progress of a civilized state.

A limited number of copies of the earlier numbers of the Journal have been set aside so that those getting acquainted with the Journal for the first time through the current number and wishing to have complete files, may begin their subscriptions with the September number.

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THE ATLANTIC CITY CONFERENCE.

On December 3d, 4th, 5th and 6th, 1918, the War Emergency Reconstruction Conference of War Service Committees and the National Councillors of the Chamber of Commerce of the United States held a convention at Atlantic City. Four thousand delegates from various parts of the country attended. Directly or indirectly, a very considerable part of the industrial wealth and enterprise of the United States was represented.

The program of the conference provided separate meetings for thirty-six, socalled, Related Groups, and ten Major Groups, made up of allied Related Groups. Also provision was made for general meetings of all groups.

The general meetings were addressed by Harry A. Wheeler, President of the Chamber of Commerce of the United States of America, the presiding officer of the conference; Charles M. Schwab, then Director General of the United States Fleet Corporation; Honorable William C. Redfield, Secretary of Commerce; John D. Rockefeller, Jr., and Honorable Paul Warburg, former member of the Federal Reserve Board. The various Major and Related Group meetings were addressed by men distinguished in many different lines of enterprise.

The readers of this publication will be interested in an address, printed elsewhere in full in this number, delivered by Honorable Thomas Ewing, Ex-Commissioner of Patents, before Major Group No. 3, Iron and Steel. This Major Group was made up of Related Groups 7 to 14 inclusive, which embraced delegates representing industrial arts in the following fields: Gas Motors, Automobiles, Engines, and the like; Steel and Iron Production, Rolled, Drawn, Fabricated, Manufactured and Cast; Machinery, Tools and Power Equipment; Hardware; Building Materials and Farm Operating Equipment. About one-fourth of the entire number of delegates at the convention attended the meetings of this Major Group.

The delegates adopted the following resolution:

> RESOLVED: That it is the sense of this Conference that Congress should, at once, equip the Patent Office to render a more prompt and accurate public service, thereby further stimulating the inventive genius of our people and more firmly stabilizing the business interests of the nation founded on patent rights; and, further

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RESOLVED: That copies of this resolution be forwarded to each member of the Patent and Appropriation Committees of the Senate and House of Representatives.

A similar resolution was also passed by Major Group 10, comprising Related Groups 33 and 35, representing Engineers, Architects, Accountants, Specialists, Trade Papers, Magazines and Newspapers.

The Patent Office Society was represented at the Convention by M. H. Coulston, President; J. H. Lightfoot, member Executive Committee, and W. J. Wesseler, Business Manager, Journal of the Patent Office Society.

THE SOUTHERN COMMERCIAL CONGRESS AT BALTIMORE.

The tenth annual convention of the Southern Commercial Congress held at Baltimore from December 8th to 15th was addressed in large measure to the problems of readjustment following the war. The development of diversified industries in the South received particular attention, and with a view of showing a helpful spirit of coöperation on the part of existing governmental agencies, the Patent Office Society was represented at the convention on Wednesday, December 11, 1918, by three of its members, W. F. Avery and T. L. Mead of the Executive Committee, and W. J. Wesseler of the Journal. This delegation first visited the Washington headquarters of the Congress and was most cordially received and assured it would be welcome at the convention. This promise was more than fulfilled when the members of the delegation were admitted to the meetings at the Emerson and Southern Hotels in Baltimore. They appreciated the kindly feelings expressed toward the Patent Office by members of the Congress and the interest manifested in the improvement of the patent system.

Resolutions similar to those presented at the Atlantic City War Emergency and Reconstruction Conference were introduced for the consideration of the Congress or its proper committees.

Among those addressing the Convention on Wednesday were Senators Hoke Smith and E. D. Smith, Representatives Padgett and Heflin, John Barrett of the Pan-American Union, and John Hays Hammond.

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MR. EWING'S SPEECH AT THE ATLANTIC CITY CONFERENCE.

The Chairman introduced Mr. Ewing in the following language: Gentlemen, we are all more or less interested in patents, and it is well worth while to hear from headquarters, from the headquarters of the Patent Office machinery; and while I do not know just how the subject will be treated today, I have pleasure in introducing to you a man who has had a large experience as Commissioner of the Patent Office, and will be personally greatly interested, and know you will, in his presentation of the subject from the inside. My knowledge of the subject has been acquired from the outside, and I have no doubt that is the experience of nearly all of you. We will have the pleasure of hearing from Mr. Thomas Ewing, formerly Commissioner of Patents under the administration of President Wilson during his first term. (Applause.)

Mr. Ewing responded as follows: Gentlemen, I believe that one result of this war is going to be that there must be new methods of business introduced, and that the competition for business all over the world will be keener than it has ever been.

All great manufacturing establishments are keenly interested in original and novel developments in their particular lines. I happen to know that the General Electric Company, as one of its activities, maintains a large and superbly kept laboratory of research, and the expenses which are incurred for it are not treated as strictly commercial, but are expected, in a large way, to pay for themselves many times over. I have no connection with the General Electric Company in any capacity. I once sold some patents to another great company, the Bell Telephone Company, with which also I have no connection. They paid half a million dollars for them, and before they had a single dollar of return, they had spent one million dollars more in determining the exact conditions of the economical use of the invention. But there has never been a time since they acquired it, when it could have been bought back from them for ten times what they paid for it. I think it is true of all great enterprises, that if they are not handled in a broad way,—I do not

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care how large the company may be, or how large its business may be—dry rot will set in, competitors with new ideas will enter the field, and they will find the ground cut from under them before they know it. Therefore, all great concerns are interested in original development, and that means that they are interested in patents, or should be; and it also means that it should be a regularly recognized line of development which must be liberally treated, both in acquisition of inventions from the outside and in developments within the company.

I know that everybody who has anything to do with the patent system complains about it, and there is reason for complaint, but the complexity of the questions, and the vast field which the patent system covers, makes it impossible that all of the troubles should be either removed or immediately mitigated.

There is one factor in our patent system which everybody should be interested in and should try to help, without any regard whatsoever to one's general opinion about what the patent system should be, or what it is worth; and that factor is the Patent Office.

We could have a system of registration of patents such as we did have down to 1836, and such as a number of countries have today, but in 1836 this Government introduced the system of granting patents on examination,—examination not only of the form of the papers, but of the invention, as to its novelty; and from that period on, the Patent Office has been an important and constantly growing factor in our system.

The theory of the Patent Office is that patents will be granted only when they ought to be granted, and that the claims that are allowed will be only such as ought to be allowed; and in view of the fact that there are more than four hundred men engaged constantly in the examination of applications, the courts give great weight to what the Patent Office concludes. They are frequently saying, "Why, there is a finding by the Patent Office; here is something which the experts of the Patent Office have held to be novel, over the other patents which are being presented to us", and the courts will therefore, reject arguments for holding a patent invalid, or for limiting it. They rely upon what the Patent Office has decided, and seek to give effect to its conclusions. With such an atti-

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tude, which is perfectly proper in view of the theory of the Patent Office, it is the worst sort of business to have a Patent Office that is insufficiently provided with men and facilities for making proper examinations. It becomes dangerous, because weight is given to patents which is not deserved, not that the Patent Office is not industrious, and not because its esprit de corps is not high, for the examiners are both industrious and of high character, but because the Office is inadequately supplied with means and with men to make proper searches, and their conclusions are therefore, in many cases erroneous.

I would like to impress upon you today that it is of the utmost importance to all of you, no matter whether you are interested in patenting inventions or are interested in going into new fields which are being developed by other people where you may have to meet hostile patents,—it is to your interest, and it is to the interest of every inventor as well of course,—that the Office be efficiently and adequately provided with the means necessary to perform its great labor.

I was in the Patent Office for four years as Commissioner, and previous to that thirty years ago as an assistant examiner; and I have practiced before it. I have left the Office, and therefore I have no personal interest in what may be done for it, or any personal pride of position in it; but it is perfectly apparent to me, that the provisions for the Office are inadequate. And it became apparent to me while I was Commissioner, that the Office through the ordinary channels is not able to influence Congress to give it proper facilities. Only influence from the outside—I mean, of course, influence that is entirely proper and legitimate, of people who are interested in having the thing done right,—can bring effective pressure to bear upon Congress. Only in that way will the Office get what it needs.

Let me give you an illustration of the difficulty. The last year I was there I made a recommendation to Congress, asking for an increase in the force which would have cost one hundred thousand dollars a year. I had studied the Office diligently for the three preceding years, and I presented the reasons for the need as strongly as I possibly could. At the end of the deliberations there was not one cent allowed for the things that I asked for. Sub-

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sequently we entered the war, and many people who had applications in the Office, which were not being reached for action because we were behind, were writing, asking to have their cases made special. I could not make one man's case special without being guilty of unfair treatment to the others whose cases were awaiting action, and I adopted the method of writing to each one who asked to have his case made special that I was unable to do so, because the facilities and means provided in the Office for acting upon the applications were insufficient, and that my appeal to Congress to increase these means, which I had based particularly upon the probability that we were going into a war, and a dangerous situation might arise, had been entirely fruitless. Some of the letters which I wrote—and I wrote many—came back to the Congressmen, and the Congressmen went to the appropriation committee, and the committee finally sent for me and said that they would hear me over again; and, after a great deal of effort I succeeded in getting an increase of about forty thousand dollars where I had asked for one hundred thousand.

What the Patent Office needs is not forty thousand dollars, or one hundred thousand dollars, but about one million dollars; and it is utterly impossible for the Office to get any such increase of appropriation, unless some large influence is brought to bear to make Congress look into the matter and see what the situation really is.

Six hundred thousand dollars a year more than is now spent ought to be spent in increasing the examination corps and the clerical force,—increasing the personnel. Three hundred thousand dollars more ought to be spent in increasing salaries. The salaries are ridiculously low. The primary examiners, of whom there are forty-five, have the authority to pass out patents, sometimes of enormous value. If one of these primary examiners signs a file wrapper, the patent goes out automatically. It is true that the Commissioner must sign it, but as he has to sign about seven or eight hundred a week, it is entirely impossible for him to examine them; and therefore, these forty-five men have it in their power to pass out patents which may be worth millions of dollars. Men who are doing work of that sort should be properly paid. The primary eaminers who have that authority receive twenty-

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seven hundred dollars a year. A very large percentage of them are men of college education or techincal school education. Most of them have gone through a law school; they are highly educated men; they are, I am happy to say, men of character. It is one of the greatest reasons for pride that we may all have that the Patent Office, the repository of seccrets of great value, immense value, is practically above suspicion as to improper dealing. (Applause.) In the four years that I was there as Commissioner, my door was open to anybody who chose to come in and complain. I never refused to see a man who called upon me the whole time I was there. I saw everyone alone. I have never had a man come to me and say there had been any improper dealings in the Office. (Applause.) I had letters,—a few letters saying that there was, and I investigated every instance carefully. I never found ground for belief that there was anything of the sort, and in the experience which I have had with the Office, running now over thirty years, only two cases have ever arisen, so far as I have been able to find, where any man was seriously suspected; one man was sent to the penitentiary and the other man died just before the question was brought up for decision. No man who had any disposition to use the Office improperly could live in the atmosphere there. He would be driven out by the other members of the corps. Now, men of such character, men who are serving in the Office as primary examiners—on the average the primary examiners have been in the Office for twenty-five years—devoting all their lives to that work, ought to be paid a salary which will enable them to bring up their families with the same educational advantages that they had themselves; that their place demands of them. Yet this is not possible under present conditions.

And what is true of the primary examiners is also true of the first assistant examiners, and the second assistant examiners. The lower grades of assistant examiners are not so important. Young fellows come in and stay a few years, go through the law schoal, learn the ropes, and go out into practice. The third and fourth assistant examiners probably get enough, but if a man is willing to stay and make that a life work, becoming, as he does, more valuable every year, because of his knowledge of the arts

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that he is examining, these men ought to be paid a proper salary, not only as a matter of justice, but as a matter of wisdom.

While there are some men of very fine ability in the Office, it is true that the work suffers seriously because of low salaries. And yet, if you go to Congress, as I went year after year, and ask for an increase of salaries for the primary examiners, and for the assistants, you will meet with this statement: "You are simply trying to get more money for a lot of men who are there now". Well, I was not. I was trying to build up a great office, or help to. It is a great office now, but I was trying to improve it, but that is the spirit that Congress displayed. They treated it exactly as if it were any clerkship that was under discussion; and the Office cannot get by it, but men like you can; if you will give the matter sufficient thought, and make up your minds that it is right, and bring influence to bear upon Congress, the matter can be rectified.

The equipment is also insufficient. For example, there is a library of technical books, and technical literature. You gentlemen all know that the technical literature of the world is very large, and constantly increasing. Congress allows three thousand dollars a year for the Patent Office to keep up with all the technical literature of all the arts. It ought to be fifty thousand dollars, and it ought to be whatever is necessary beyond that; and yet it was absolutely impossible for me to get one dollar beyond the three thousand dollars a year while I was there. There was a separate set of German patents, two hundred thousand in number, which we wanted bound up, classified according to German classification, so that searches might be made through them by the public who are interested. Instead of making a list of all the patents that dealt with electrical matters, for example, and then going through twenty-one hundred volumes to get at them, we wanted to have four or five volumes with all electrical patents in them, and so with the other arts. It tok me three years to get an appropriation of twenty thousand dollars to bind them, and during that whole time they were tied in bundles, because we did not dare open the bundles for fear numbers would be lost.

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There is another matter of great importance. These young men and these older men, the examiners, instead of being obliged to get knowledge from books only, ought to be able to go out and see what the manufacturers are doing in their establishments. They ought to learn the arts as they are actually practiced, so that their judgment would be sound. I sent out as many as I could; I would have sent all of them out from time to time to make investigations if I had been permitted to do so. I could have raised a fund of fifty thousand dollars easily by voluntary subscription from concerns that had applications pending, but sending the young men out by the use of funds raised in that way would have put the Office under obligations, and it would have placed the assistants in positions where they might be open to suspicion and criticism because they had a pleasant trip to Chicago, or St. Louis, or elsewhere; and Mr. Lane, I think properly, said he would not permit it. But there was a fund which I used for that purpose. It was five hundred dollars. (Laughter.) There are now four hundred and nineteen in the corps; this sum was about $1.25 apiece for these men. (Laughter.) I tried my best to get Mr. Lane to agree to ask Congress for thirty thousand dollars for that purpose, and he said it was absolutely useless; he would not do it; he knew it would not be granted. But an appropriation like that, properly presented to their Congressmen, by people who know the importance of it, might easily be accomplished.

I wish to speak, also, of the position of the Office in the governmental system. The Patent Office is a bureau of the Interior Department. When I went into office I did not know Secretary Lane. He sent for me shortly before I was appointed and I then met him for the first time. I formed an intimate friendship with him, our relations were most cordial, and I regard him as a great man, and yet, in spite of that, I am obliged to say, after a four years' experience as Commissioner that the Office gains nothing by being a bureau of the Interior Department, and that it is seriously handicapped by the connection. It ought to be an independent office, answerable to nobody but the President and Congress, just as the Agricultural bureau was before the present Department of Agriculture was created. The reason is that it is one of

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eight different bureaus, unrelated, the work in one not similar to the work in another, the needs of one not similar to the needs of another. But, if an attempt is made to increase the salaries in the Patent Office, or to increase the personnel, immediately the question arises, "What about the Land Office? Won't the Commissioner of Pensions want salaries raised?". Thus a comparison is made between the Patent Office and its needs and the needs or demands of other offices having no relation to it whatsoever. That comparison the Secretary could not fail to make, no matter how well he might understand the conditions in the offices, because he would arouse jealousy. And if he made up his mind that one office needs better salaries than the others, because it is engaged in a higher class of work, and were to pass that recommendation on to Congress, the Congress itself would make the very same comparison, and he would not get anywhere.

If the Office were an independent bureau it could fight its own battles without any such disadvantageous comparisons, and I believe that if that change were made and gentlemen such as you are would interest yourselves, and get your local bureaus and your legal departments to interest themselves, in any way you may see fit, in the needs of the Office, we might get the necessary assistance from Congress, and we could build the Office up to the point where it was in fact, as it should be, the most superb patent office in the world—and that its judgments would be far more certain and trustworthy. I think such action would save every year, in the relief of business from the uncertainty of wrongly-granted patents, millions of dollars over all that it would cost.

It is constantly said, when the subject of increased appropriations for the Patent Office is raised, that the Office pays its own way. In the last five years it has turned back into the Treasury about one million dollars over the entire appropriation for it, and the building which it occupies was largely built out of surplus which had accumulated in the treasury from Patent Office fees. But there is no reason why public money should be wasted, no matter where it is drawn from, and the income of the Office is not the measure of its needs, nor of the service it renders to the public. If the Office must be kept self-sustaining, it is an easy matter to increase the fees for patents,

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and I think that the business interests of the country would stand it. I do not think that is important. The important thing is that the needs of the Office should be intelligently studied by Congress, and when ascertained they should be provided for, without any regard to whether the Office costs one million dollars over what it receives in fees or not.

As I have said, the Office is absolutely unable to help itself. Anybody who as Commissioner starts in to get something for the Office is immediately accused of trying to get something for himself. But intelligent bodies, and influential bodies such as this, can influence and should influence Congress. Here is a field of constructive work, where the result will be to the interest and advantage of all of us. I trust that you will make it a matter of serious thought and conerted action. I thank you very much for the opportunity to bring the subject to your attention. (Great applause.)

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INDEX OF GERMAN PATENTS.

The Scientific Library announces that it has completed a translation of the 1914 Alphabetical Index to the classification of all German patents.

The various inventions, identified by title, or subject-matter as indicated elsewhere than in the title, are arranged alphabetically and are indexed to the class or classes of the new German classification where inventions of the same character are found.

This index contains over 75,000 items. A typewritten copy is now available in the Library, but it is expected to print a considerable edition for public distribution in the near future. In view of the fact that the German patents are now accessible in bound volumes arranged according to the German classification, the index is particularly valuable.

[The appearance of the translation of the Alphabetical Index to the classification of German patents offers a suitable opportunity of suggesting the establishment of a similar index in connection with United States patents. On account of the fact that the German classification is not subject to so many changes as ours, it is feasible to issue the index in book form. If a similar project were undertaken in connection with our classification, on account of the many changes continually taking place, a card index would probably be the only feasible scheme. This index could be developed by each assistant examiner for his own class. Obviously, such an index would not be perfect, but would be of vast assistance to searchers familiar only with trade names and practical applications of inventions. If such an index is advisable for German patents, it would seem to be even more necessary for our far greater number of patents and classes. The scheme proposed by Mr. Teller in his letter elsewhere in this number is along the same lines as the German Index; but his proposed index being confined to trade names, lacks in completeness what an index covering all patents and classes would possess.—EDITOR.]

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LETTERS ON CLASSIFICATION OF PATENTS.

To the Editor:

Mr. Thurber, in his most excellent article on the classification system in your November issue, makes a statement which is worthy of the most careful attention. He says that there are searches "to which the Office system does not adapt itself no matter how familiar one may be with it. The search sometimes does not depend upon the particular structure employed but rather upon the question whether a certain thing has been accomplished in some particular industrial art, quite apart from the type of structure that might be employed in carrying it into effect." In my opinion this is the usual, rather than the exceptional, case involving patentability; and it is precisely this fact that makes the present system, by itself, so often unsatisfactory to attorneys who insist upon considering the fundamental or ultimate function of an invention rather than merely the superficial or incidental details.

Occasionally it is apparent from the outset that an invention is entirely specific or structural in character; that is, that it is limited to features whose functions are direct and obvious. But usually the invention appears to be primarily functional in character; that is, the inventor has conceived a new or supposedly new result to be accomplished in some particular practical or industrial art and has thereupon devised a specific device or mechanism for accomplishing the result. If the inventor is an intelligent and thoughtful man, he realizes that his particular details of structure are probably of little importance as many other different structures can be devised for the same purpose. He is therefore primarily interested in devices of whatever type for accomplishing the same result that he accomplishes, and only secondarily interested in the particular mechanism which he himself has thought of.

An attorney in making a patentability search in connection with such an invention directs his attention primarily to the result to be accomplished in the given art and he endeavors to learn what devices or mechanisms

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have been heretofore proposed for accomplishing this result. The conception that he has in mind is not limited to any definite structure, and in fact it is the purpose of the search to ascertain definite structures. He is working away from the indefinite toward the definite. The classification system should be such that the searcher can start with a vague or indefinite functional conception and conclude with a list of the patented devices or mechanisms of whatever character for performing the given function. In some cases the present system meets this requirement, but in the majority of cases it does not. It may be found as the search proceeds that the fundamental function is not new, as had been supposed, and that the novelty, if any, resides in the particular structure, which may appear to have certain specific advantages; and in this case it may be desirable to continue the search among structurally similar mechanisms in other arts. But whether the function turns out to be new or not, the attorney should be able to readily collect all of the pertinent material, including both functionally similar mechanisms in the same art and structuraly similar mechanisms in other arts, so that he may know exactly where the invention stands and thus be able to draw proper claims. Frequently, the inventor, having been advised that the function or result is not new as he had supposed, and having further discovered that other proposed devices are just as good as his, would conclude that his supposed invention was not worth while and would drop it, thus avoiding expense to himself and relieving the Patent Office of the burden of handling an application for a trivial improvement.

The situation is similar in the case of a manufacturer who desires to collect the art relating to the line of his manufacture. He is not particularly interested in gathering together a lot of patents out of a variety of arts, but he does want to see just what the various inventors of the country have devised for the same specific purpose as the goods which he himself manufactures. From the expired patents he can expect to get suggestions which will assist him in improving his own product, and it is essential for him to know of the unexpired patents in order that he may avoid infringement. For instance, if a manufacturer is interested in gland packings for

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steam engines, hydraulic pumps, etc., it should be possible for him to readily obtain a list of all patents covering articles of this kind. But under the present system gland packings are classified in a number of different places according to the material used, according to the arrangement of the material—for example, whether twisted or braided, according to whether the packing is or is not impregnated with some compound, etc. The only way for a searcher to completely collect an art such as this one is for him to know in advance all of the different kinds of the article or machine for which he is to search. If there is some kind which he unfortunately does not know about in advance, the probability is that he will not find it.

A Patent Office examiner in making a patentability search is confronted with a condition exactly opposite to those described; and the same is true of an attorney in making a validity search or even in making a patentability search for an obviously structural invention. The examiner or the attorney is provided with a complete disclosure and a specific definition of a certain detailed structure and his problem is to find structures as closely similar as possible, frequently without much regard to the ultimate or fundamental function.

A classification system along the lines of the present one is unquestionably necessary for making such searches by an examiner or an attorney, but it should not be the only system. Existing by itself, as it now does, it makes it doubly easy for both the attorney and the examiner to follow the path of least resistance and consider only the actual construction and its immediate function and to disregard the real functional or industrial improvement which the inventor had in mind. By way of example, suppose an inventor has devised a printing press control system, whereby electrical devices are used to start, stop, reverse and otherwise control a printing press in an entirely new manner. The attorney's natural tendency, fostered by the present classification system, is to consider only the immediate or proximate function of the mechanism and therefore to treat the invention as one in electric control systems only. Searching in the electrical classes, he may find that as an *electric control system* it

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is not particularly new and may thus conclude that the invention is unimportant, entirely overlooking the fact that as an improvement in *printing presses* the invention is broad and basic. However, if the attorney is fully appreciative of the possible scope of the invention, from the standpoint of the fundamental functional improvement in printing presses, he will attempt to make a broader search, only to find, perhaps, that printing press control systems are variously located according to whether the control is effected electrically or mechanically or pneumatically or hydraulically or in some other way. He will find nothing in the classification system to enable him to readily collect *all* printing press control systems. The examiner finds himself similarly handicapped when the application is filed, and if broad claims are presented without electrical limitations, he has no assistance from the classification system in determining the necessary field of search. The system is seriously defective in that it presumes the searcher to have quite specific and detailed knowledge of what he is looking for. Failing in this, the searcher is practically helpless.

The classification system should be such that both the attorney and the examiner can consider an invention from two standpoints; that is, they should be able to readily ascertain, first, whether the ultimate or fundamental function is new, and, second, whether the structure and immediate function are new. Very few inventions can be properly handled without full knowledge on both of these points.

While an art classification is ideally desirable, it would undoubtedly present many practical difficulties. One of the most troublesome difficulties that suggests itself is that of the disposition of the innumerable patents in which the inventors, either expressly or impliedly, disclaim any limitation to a particular art. What would be done with a patent for a valve which the inventor says may be used for an internal combustion engine or for a hydraulic pump or for a petroleum pipe line system? These difficulties could probably be overcome, but the making of a second complete classification would be a laborious and expensive undertaking which could not be completed for years.

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By way of compromise, I venture to suggest that careful consideration be given to the question as to whether or not the imperative need for an art classification might not be largely or entirely met by a proper and thoroughgoing index of the present classification.

An index such as contemplated should contain the common colloquial or trade or shop names of all devices or machines for which patents have been issued. Under each name there should be a list of the classes and subclasses containing pertinent patents. In the case of articles or machines having definite well-recognized parts, each of these parts should be listed under the main machine heading with proper references to the classes and subclasses where those parts may be found. In the case of the classification of a few patents covering a particular type of machine with a large number of other patents covering other types of machines, the patents covering the machine in question should be specifically listed by number so that the searcher would not have to go over a large subclass to pick out the three or four patents that might be pertinent. An index of this sort would tell a searcher that some magazine mechanisms for metal working machines are classified under Conveyors; that some gas engine manifolds are classified under Water Distribution; that some automatic stop mechanisms for phonographs are classified under Machine Elements; that some carpet-stretchers are classified under Pushing and Pulling Implements; that some corn planters are classified under Dispensing. The present index in the back of the Manual of Classification is of but little assistance as in many cases it does not use the usual trade or shop terms, and as it does not purport to furnish a complete list of the classes where a given article may be found.

With an index of this character, a person interested in automobiles, or in some of the component parts thereof, would have available a list reading in part somewhat as crudely indicated below. I do not mean by this outline to suggest specifically what any of the details of the index should be, my only thought being to illustrate the basic principle in a most general way. (The class and subclass numbers are obviously fictitious.)

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	Classes.	Subclasses.
Automobile	310	All
Air Cooling System—See Cooling System.		
Body	310	6-11
	449	18,19,24
Door	310	11
	449	24
	390	40-45
Change-Speed Mechanism—See Transmission System.		
Chassis	310	1-5
Axle	310	5
	367	1-14
	319	38
		Pats. 1,346,897
		1,491,679
		1,493,994
Clutch—See Transmission System.		
Cooling System	310	20-29
	411	40-51
Air	310	21-23
	411	41-45
Water	310	24-29
	411	46-51
Pump	411	51
	401	33-53
Radiator	411	50
	399	10,12,14
Cushion Tire—See Tire.		
Dirigible Headlight—See Headlight.		
Door—See Body.		
Electric Lighting System—See Lighting System.		
Electric Motor—See Motor.		
Electric Starter—See Starter.		
Fender	389	31-36
Gas Lighting System—See Lighting System.		
Gasolene Engine—See Motor.		
Gear Change-Speed Mechanism—See Transmission System, Change-Speed Mechanism.		
Hand Warmer	399	6
Headlights	310	60,61
	487	19,40-47
Dirigible	310	61
	487	44-47
	301	17-23
Horns	377	16-24
	379	1-10

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Such an index, in conjunction with the present classification system, would enable both attorneys and examiners as well as the public at large to make searches from two differing points of view, thus making it possible to collect everything that is pertinent in connection with a given subject whether the pertinency arises from "art" or ultimate functional similarity or from structural or proximate functional similarity. In this way the classification system would enable the Patent Office to more effectively "promote the progress of Science and Useful Arts".

Very respectfully,

S. JAY TELLER.

November 30th, 1918.
111 Broadway, New York.

To the Editor:

Having had an opportunity to read the manuscript of Mr. Teller's able discussion on classification, I take the liberty of offering a few comments in regard to the trade index which he suggests.

Such an index would be of great value and might be used at times as an excellent substitute for dual classification. In many instances, however, it is believed the results of such substitution would be far from satisfactory.

For illustration, when the class of "Paper Making" was reclassified the mills for grinding up wood pulp were transferred to the class of "Mills". "Mills" not having been reclassified, no attempt was made to arrange these machines with those used for other purposes but having structural resemblances. At present, therefore, this group is intact and it is a simple matter to refer those interested in paper-making machinery to the subclass of "Mills, Wood and Bark," in the class of "Mills". However, when the class of "Mills" is reclassified, this group may be scattered through the entire class so that even if every patent were indexed it would take considerable time to run them down.

Also, in connection with the class of "'Paper Making", attention might be called to a group of machines known as "Save-alls", devices for extracting fibers from the

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waste water of paper-making machines. Save-alls were transferred to the class of "Water Purification", but unlike pulp mills were classified on a structural basis in various subclasses. Therefore, if one would find all the save-alls one must search the entire class or rely on an index of individual patents, if such an index were in existence.

An index of the individual patents which have been transferred out of some of the larger classes would be almost appalling, indeed in some instances it would appear as though an attempt had been made to find a different class or subclass for each patent thus transferred. It is thought, therefore, that only in those instances where certain groups are transferred bodily out of industrial art classes is it feasible to rely on an index.

However, it is not intended by these remarks to oppose the preparation of a trade index, but only to point out wherein it would be insufficient as a substitute for classification. The index is needed and should be as complete as possible, covering all the technical and popular terms by which things are known. These terms, it is suggested, should be arranged in the usual alphabetical order and the field of search for each should be indicated as far as possible. Of course, until reclassification has reached a more settled condition, continued revision of the index would be necessary. Nevertheless the need is so great that it is thought the matter should be taken up as soon as it is possible to obtain people to do the work.

Respectfully,

W. L. THURBER.

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RULES 30 TO 36 INCLUSIVE.

By C. H. LANE, Examiner.

(Delivered before the fourth assistant examiners.)

RULE 30.

Applications for letters patent of the United States must be made to the Commissioner of Patents, and must be signed by the inventor, or by one of the persons indicated in Rule 25. (See Rules 26, 33, 40, 46.) A complete application comprises the first fee of $15, a petition, specification, and oath; and drawings, when required. (See Rule 49.) The petition, specification and oath must be in the English language. All papers which are to become a part of the permanent records of the office must be legibly written or printed in permanent ink.

Section 4888 R. S. requires the inventor to make application for his invention in writing, to the Commissioner of Patents.

Signatures and Parties.

Section 4888 R. S. also requires that the specification and claims shall be signed by the inventor, and section 4889 requires that the drawings shall be signed by the inventor or his attorney in fact. If the inventor has no attorney, he signs the drawings himself. If he has an attorney, he may still sign the drawings, or his name may be affixed to the drawings by the attorney, who adds his own signature, designating himself as attorney. If the drawing is signed by the inventor in person, the attorney should not write his name below that of the inventor, (*Ex parte* McDonald, C. D., 1902, pg. 408) and if the drawing is signed by one attorney, a new attorney should not erase the attorney's signature and substitute his own. (Order 480, 43 O. G., 1119.) The signature of the inventor or his attorney must in all cases be in his own characteristic handwriting. A *fac simile* signature made with type or a rubber stamp will not serve, but if it is made on a drawing the one whose name is thus printed may remedy the defect by tracing the printed or stamped signature in ink. (*Ex parte* Krause, C. D., 1891, pg. 164.)

If the inventor is alive and sane no other person can under ordinary circumstances sign the application papers for him. (Kennedy *v.* Hazelton, C. D., 1889, pg. 349.)

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Papers executed by the attorney in fact can not be treated as forming any part of a lawful application. (*In re* Tropenas, C. D., 1900, pg. 14.) This is true even if such action is authorized by a power of attorney. (*Ex parte* Sassin, C. D., 1906, pg. 205.) Since September, 1915, however, application papers executed and filed by attorneys for inventors have been accepted, where on account of the war, it was impossible to comply with the statutory requirements, and the time of filing was about to expire under the International Convention reported in 205 O. G., 1022. (Commissioner's Report for 1916, 235 O. G., 710.) Partially remedial legislation was provided by the act of Aug. 17, 1916, 229 O. G., 1257, (See also *ex parte* Feroci, C. D., 1916, pg. 51) granting an extension of nine months beyond the period limited by the law, in which to file any application, pay any official fee, or take any required action. The privileges of this act were limited to citizens of those nations which granted reciprocal rights to citizens of the United States, and only to those citizens who were unable on account of the existing and continued state of war to take proper action. Commissioner Ewing held that citizens of the United States also were entitled to the benefits of the act of August, 1916. (*Ex parte* Rieder, 243 O. G., 1309.) This act has expired.

Citizens of enemy nations and their allies may still file and prosecute applications, and the privileges of the act of Aug. 17, 1916, are in effect extended to them by the Trading with the Enemy Act, Sec. 10(a), 243 O. G., 1070. Citizens of the nations allied with the United States are not thus favored by legislation. (Commissioner's Report for 1917, 249 O. G., 244.) They may still proceed as permitted by the Commissioner in his report for 1916.

No patent can be granted on an application executed by the attorney for the applicant, until duplicate papers executed and signed by the inventor shall have been filed. (Sec. 4888, R. S.)

An application requesting the grant of a patent to joint inventors, executed by only one of them, will not be accepted as complete (*In re* Crane, C. D., 1903, pg. 322), and an application executed by two applicants as joint inventors cannot be changed to an application by one of them as sole inventor (*Ex parte* Erne and Bridges, C. D. 1897, pg. 197); also an application alleging that one party

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is the sole inventor and asking that a patent be granted to him cannot be changed to a joint application even though signed by two parties, if there is nothing except the signatures to show that they are joint inventors. (*Ex parte* Gordon, C. D., 1904, pg. 20.)

The decisions just cited do not forbid corrections by a new oath where the only mistake consists in the accidental use of the word "sole" for "joint", or *vice versa,* in the original oath.

If the statements in the different parts of the application and the signatures thereto are so contradictory or confusing that it is impossible to tell whether the invention is joint or sole, the inconsistency can be cured only by a new application. (*Ex parte* Henze, C. D., 1900, pg. 44.)

When the inventor dies or becomes insane before making application for a patent the right of applying for and obtaining the patent devolves on his executor or administrator in the one case, and on his legally appointed guardian, conservator, or representative in the other. (Section 4896, R. S.) An application filed by the widow or heir usually has no standing unless such party files the application as executor or in some other capacity permitted by the statute. In some countries, however, the law empowers the widow to administer the estate of her deceased husband without the order of a court. (See *ex parte* Niedenfuhr, C. D., 1907, pg. 257.) In such a case she can make the application as the widow of the inventor and the patent will issue to her as such. The proofs that the person applying for a patent is the authorized legal representative of the deceased or insane inventor are not transmitted to the examiner, but are forwarded to the Assignment Division of the Patent Office for record, and the examiner should not pass the case to issue unless the chief of the Assignment Division reports that the authority of such legal representative is sufficient (Order No. 1838, Jan. 13, 1910, 151 O. G., 453.)

When an application is made in behalf of a deceased or insane inventor the applicant should indicate in the papers in what capacity he is making the application, and for whom; the petition should make reference to the accompanying papers authorizing him to act for the deceased inventor; and he should sign his own name to the

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various papers, adding the words "administrator (or whatever the appropriate title my be) for" (naming the inventor). For convenience in indexing, the application will be made up and the patent will issue in the name of the deceased or insane inventor, followed by the name and proper designation of the person making the application.

English Language.

Rule 30 requires that the petition, specification, and oath shall be in the English language. This is not a statutory requirement, but Assistant Commissioner Greeley held that an application in the German language should be stricken from the files, although it was accompanied by a translation. (*Ex parte* Gentzsch, 62 M. S. Dec., Oct., 1897; Hart's Digest, pg. 33.) In this particular case the ribbon required by Rule 47 had been cut.

Permanent Ink.

The requirement that the papers shall be in permanent ink is not a statutory one, but decisions to the effect that papers filed in violation of this rule will be refused admission, have not been publicly overruled. There are standard tests used by the executive departments that examiners may apply. In all cases where carbon copies or papers written in pencil reach the examiner he shall require the applicant to furnish permanent copies. It has even been held that carbon copies do not entitle the applicant to a filing date. Anilin inks have also been condemned. (*Ex parte* Ritter, C. D., 1891, pg. 242; *ex parte* Webster, C. D., 1902, pg. 456; Order No. 37, May 27, 1902; *ex parte* Blaubach, C. D., 1898, pg. 193; *ex parte* Gilmore, Jr., and Clark, C. D., 1916, pg. 34.)

RULE 31.

An application for a patent will not be placed upon the files for examination until all its parts as required by Rule 30 shall have been received.

Every application signed or sworn to in blank, or without actual inspection by the applicant of the petition and specification, and every application altered or partly filled up after being signed or sworn to, will be stricken from the files.

Completed applications are numbered in regular order, the present series having been commenced on the 1st of January, 1915.

The applicant will be informed of the serial number of his application.

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The application must be completed and prepared for examination within one year, as indicated above, and in default thereof, or upon failure of the applicant to prosecute the same within one year after any action thereon (Rule 77), of which notice shall have been duly mailed to him or his agent, the application will be regarded as abandoned, unless it shall be shown to the satisfaction of the Commissioner that such delay was unavoidable. (See Rules 171 and 172.)

When an Application is Ready for Examination.

An application has been held incomplete where a wrong specification had been filed with the petition and oath, both of which referred to the "annexed specification". (*Ex parte* Page, C. D., 1901, pg. 156.) An application is also not complete if there is inconsistency in the statements as to who is the inventor. (*Ex parte* Henze, C. D., 1900, pg. 44.) An application claiming a process will be entered as complete without drawings, although the examiner may subsequently find them necessary or desirable to show the means for carrying the procees into practice. (*Ex parte* Russell, C. D., 1898, pg. 208; *ex parte* Schmidmer, C. D., 1905, pg. 74.)

Applications have been held incomplete and a filing date refused when portions of the drawings referred to in the specifications were not received. (*Ex parte* Ehrendreich, C. D., 1904, pg. 75; *ex parte* Michaelis, C. D., 1906, pg. 123.) In the latter case the Commissioner also decided that if the applicant is of the opinion that the omitted figures do not involve a substantial departure from the disclosure in the original copies, he may file a petition for the original filing date, accompanied by the omitted figures.

Just how much is required by statute to place an application in condition for examination depends upon the meaning of the words "such application" in section 4893 R. S. The determination of this matter rests primarily upon the chief of the Application Room, but if by oversight he should forward to the examiner an application not ready for examination, the examiner should return the application to him. (*Ex parte* Becker, C. D., 1901, pg. 198.)

What constitutes a complete application will first be considered from that point of view most favorable to the applicant.

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Certainly no application is ready for examination without a specification, because there can be no examination in the absence of a disclosure of the invention. Besides this, payment of the fee in advance of examination is required under section 4893 R. S., and this section also requires the filing of an "application". It is thus clear that before a case can be forwarded there must be at least an "application", a fee and a specification. What is meant by the "application" may be made clearer by reference to section 4888 R. S., which requires the inventor to make application for a patent, in writing, to the Commissioner of Patents; and to section 892 R. S., which in very similar language provides that any person making application for copies of records, books, papers, etc., shall have certified copies thereof. It may be, therefore, that the "application" required by section 4893 R. S. is a mere request for a patent, made in writing, to the Commissioner of Patents. Also, in *ex parte* Livingston, C. D., 1881, middle paragraph of pg. 47, the Commissioner gave this meaning to the word as it is used in section 4897 R. S. A specification may, perhaps, even be forwarded for examination without a formal petition or request, provided the filing of the specification and other papers accompanying it can be fairly construed as a request for a patent.

Of course all the requirements of section 4888 to 4893 R. S., regarding the oath, drawing, etc., must be met before a patent is granted, but we are at present considering only the prerequisites to an examination.

Section 4892 R. S. does not say when the oath shall be filed (Dukesmith *v.* Corrington *v.* Turner, C. D., 1906, pg. 426), and section 4889 R. S. does not say when the drawing shall be filed, but an application is incomplete without a drawing if the invention cannot be disclosed without it, or if the specification refers to it and is dependent upon the drawing for its meaning. (*Ex parte* Russell, C. D., 1898, pg. 208.)

In Marconi *v.* Shoemaker, C. D., 1907, pg. 392; it was held that an applicant was entitled to his original filing date, although the drawings were signed by substitute attorneys who had not full power, the informality having been cured by subsequent ratification by the persons delegating the power.

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Having considered the prerequisites of a complete application from the most liberal point of view, the other and stricter view will now be considered. This is that the words "such application" of section 4893 R. S. have for their antecedent the complete application described in sections 4888 to 4892 R. S., so that at least all the requirements of the statute as to the form of the petition, specification, claims, drawing and oath must be met before the application is ready to be forwarded for examination. In view of the ambiguity of the statute, however, there seems to be room for the exercise of discretion by the Commissioner as to how much more or less than is required by the statute (as prerequisite to the grant of a patent) he shall insist upon before allowing the case to be forwarded.

In 1910 it was ruled that applications would not be given serial numbers and forwarded to the examiners unless the petition, specification and claims, and drawings, had been properly signed, and unless the requirements of sections 4887 and 4892 R. S., the latter relating to the oath, were fulfilled. (Commissioner's Order, 155, O. G., 311, June 11, 1910.) All these requirements except that relating to the petition are statutory. In harmony with this order it has been held that an application is incomplete if the specification is not signed by the inventor (*Ex parte* Gilmore, Jr., and Clark, C. D., 1916, pg. 34), if the drawing is not properly signed by the inventor or his attorney in fact (*Ex parte* Arndt, C. D., 1900, pg. 167), or if an unsigned tintype is filed instead of a drawing. (Palmer and Thompson *v.* Bailey, C. D., 1898, pg. 66.) It has also been held that an application is incomplete if the oath is administered by an officer who is also an attorney in the case. (Riegger *v.* Beierl, C. D., 1910, pg. 12.) This ruling is based on section 558 of the Code of Law of the District of Columbia, which applies to all attorneys, and not alone to those in the District of Columbia. (Hall's Safe Co. *v.* Herring, C. D., 1908, pg. 473.)

The Commissioner, in the exercise of his discretion, has sometimes refused to forward applications to be examined where important provisions of the Rules have been ignored, although such provisions are not expressly authorized by the statute. Where an oath was taken in a foreign country without the ribbon and seal required by

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Rule 47, it was directed that the papers be returned. (*In re* Hosking, C. D., 1900, pg. 70.) In *ex parte* Brand, C. D., 1898, pg. 12, the applicant was refused the benefit of his filing date because the applicant's residence was not stated in the petition, specification or oath. This decision was later overruled. (*Ex parte* Becker, C. D., 1901, pg. 198.)

In general it may be said that the Office is disposed to give the inventor the benefit of the doubt when the sufficiency of an application is in question, in order to secure for him the earliest possible filing date. On the other hand, no careful inventor or attorney will needlessly jeopardize the inventor's interests through failure to comply in advance with all statutory and published Office requirements, since an application may be accepted for examination and yet be held incomplete at a later and more critical time. (Palmer and Thompson *v.* Bailey, *supra.*)

As to the practice when fatally defective applications are forwarded to the examiner:— if the defect is due to omission, through oversight, to comply with some essential provision of the Rules or statutes, the application should be returned to the application clerk; if the application is sufficient in form, but lacking in substance, as in the case of failure to disclose the invention, the case should be retained by the examiner and rejected on the ground that the provisions of section 4888 R. S. are not satisfied; and if the defect is due to apparent fraud, the case should be referred to the Commissioner.

Papers Executed in Blank.

An exception to the rule that such papers will be stricken from the files is found in *ex parte* Shaver, C. D., 1907, pg. 428, in which it was held that an inventor who assigns his invention is estopped from afterward denying the validity of the executed papers.

Alteration or Substitution of Papers.

This rule is not intended to prevent an attorney from making formal or immaterial changes in an application once sworn to, but precludes the insertion of new and material matter. (Lindstrom *v.* Ames, C. D., 1911, pg. 384.)

The question of striking an application from the files because of alleged alteration therein after it has been

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sworn to is not a matter for the action of the primary examiner, but is exclusively within the jurisdiction of the Commissioner. (Hopkins *v.* Scott, C. D., 1903, pg. 261.)

Where an application as filed appears to have been changed after having been executed, and the applicant makes no showing in reply to an order to show cause why it should not be stricken from the files, it will be stricken from the files under the provisions of Rule 31. (*Ex parte* Kupper, C. D., 1898, pg. 5.)

An application will be stricken from the files if an omitted page of the specification is substituted by the attorney before filing the application (*Ex parte* Raetzell, 62 M. S. Dec., Oct., 1897), or, in case of an application executed in a foreign country, if the ribbon secured by the seal is cut, and no explanation given (*Ex parte* Becker, M. S. Dec., June 28, 1898), or if the sheets of the specification are removed from the ribbon, and another specification substituted (*Ex parte* Altmann, C. D., 1897, pg. 52), or if a surreptitious alteration is made in the drawing after filing the application (*Ex parte* Merrill, 53 M. S. Dec., Nov., 1893), but it has been held that the mere inking of a drawing, after the application is sworn to, is not such an alteration as will warrant striking the application from the files. (Hopkins *v.* Scott, C. D., 1903, pg. 261.)

Whether an alteration is made by the attorney with the inventor's consent or not is immaterial. (Moore, Commissioner, *v.* Heany and the Heany Co., C. D., 1909, pg. 488.)

Restoration of an application to its original condition can not be permitted after it has been mutilated and changed by fraudulent and deceptive intention. (*In re* Charges by Examiner A. F. Kinnan and Others, C. D., 1911, pg. 139.)

In Commissioner's Order No. 1455, July 26, 1904, it was directed that no erasures or any note, interlineation or other mark in pencil or otherwise except by formal amendment duly signed, shall be made in the body or written portions of the specification, or any other paper filed in an application for a patent. It is believed that this does not prohibit the making of examiners' notes in pencil on the margins of the pages, but examiners' notes should be erased before passing a case to issue.

No change shall be made by any person in any record

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of this office without the written approval of the Commissioner of Patents (Order No. 1455), but the following corrections may be made in the drawing (by the Office draftsman upon request of the examiner without writing to the attorney and without filing a print:—

A few reference characters may be added.

The ordinals of figures may be changed.

Names of inventors may be changed if written by attorney.

Section lines and their numerals may be changed.

Time for Completing Applications.

This paragraph of the Rule is based on section 4894 R. S., which requires that "all applications for patents shall be completed within one year after the filing of the application", etc. It has been held that the words "filing of the application" in this section do not mean the filing of the completed application, but only the depositing of the application referred to in section 4893 R. S., which may or may not be accompanied by the fee. (*Ex parte* Fenno, C. D., 1890, pg. 138.) Further treatment of this subject properly belongs to the discussion of Rule 171.

RULE 32.

It is desirable that all parts of the complete application be deposited in the office at the same time, and that all the papers embraced in the application be attached together; otherwise a letter must accompany each part, accurately and clearly connecting it with the other parts of the application. (See Rule 10.)

Failure to deposit all the parts of an application in the Office at the same time or to properly identify parts filed after the filing of the first papers, has sometimes led to the placing of papers in other applications than those for which they were intended. It is important that this rule be strictly observed by those having business with the Office.

RULE 33.

The petition must be addressed to the Commissioner of Patents, and must state the name, residence, and post-office address of the petitioner requesting the grant of a patent, designate by title the invention sought to be patented, contain a reference to the specification for a full disclosure of such invention, and must be signed by the inventor or one of the persons indicated in Rule 25.

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As before stated, section 4888 R. S. requires the inventor to make an application for a patent to the Commissioner of Patents. Proper compliance with this section necessarily results in something in the nature of the petition described in Rule 33.

The nature of the title is set forth in section 4884 R. S. It must be short and it must correctly indicate the nature and design of the invention. Within these limits it is the privilege of the inventor to choose the title, but it is for the examiner to determine whether the title satisfies the requirements of section 4884 R. S. (*Ex parte* Nikola, C. D., 1891, pg. 215; *ex parte* Mackintosh, C. D., 1911, pg. 13.) If the title is not satisfactory objection should be made, but the examiner should not arbitrarily select the title. (*Ex parte* Becker, C. D., 1893, pg. 95.)

Any part of the petition (by which is meant the petition proper, and not the power of attorney) may be amended except the signature and the post-office address. Correction of the post-office address may be made by filing a new petition, or by filing a letter signed by the applicant in person and giving his actual post-office address. (Order No. 1994, July 11, 1912.) The object of having the post-office address is to enable the Patent Office to communicate directly with the applicant; therefore objection should be made to a post-office address which is identical with that of the attorney for the applicant, or of a disbarred attorney; or in care of either such attorney. (See Notice, 225 O. G., 375.)

The petition does not itself disclose the invention and is therefore incomplete unless it refers to some paper (the specification) which does disclose it. (*Ex parte* Mason, C. D., 1888, pg. 33; *ex parte* Buddington, C. D., 1898, pg. 184.) In the latter case it was held that the particular form of expression is immaterial and if the petition is not filed at the same time as the specification some other words may be used instead of "the accompanying specification".

RULE 34.

The specification is a written description of the invention or discovery and of the manner and process of making, constructing, compounding, and using the same, and is required to be in such full, clear, concise, and exact terms as to enable any person skilled in the art or science to which the invention or discovery appertains, or with which it is most nearly connected, to make, construct, compound, and use the same.

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It is one of the most important duties of an examiner to insist upon a strict compliance with the provisions of the statute, that the specification shall contain a full, clear, concise and exact description of the invention, and where the meaning of certain terms is obscure or ambiguous, the applicant shold be required to amend so as to remove that objection. (*Ex parte* Gould, C. D., 1876, pg. 164.)

Some of the decisions cited below seem to set up a lower standard than that declared by the Commissioner in *ex parte* Gould, but it should be remembered that in nearly every one of those cases the patent had been already granted, and the one thing to be considered by the court was the validity of the patent. An application pending before an examiner stands on a different footing. Objectionable matters may be cured by amendment and much litigation such as others have had to undergo in order to sustain their patents may perhaps be avoided. Moreover, the application will probably become a publication, upon which the examiner must rely in the future as indicating in part the state of the art. For this purpose it is necessary that even those parts of the description which do not affect the claims should be clear and complete or eliminated altogether. A good examiner will endeavor to avoid vexatious and unnecessary requirements, but he, as well as the specification writer, will endeavor to see that the requirements of the statute are carefully observed. (*Ex parte* Cornell, C. D., 1872, pg. 120.)

Necessary Fullness of Description.

If the specification has to be supplemented by experiment and inventive skill, a patent based upon it is void. (Tyler *v.* Boston, 7 Wall., 327; The Tannage Patent Co. *v.* Zahn, C. D., 1895, pg. 367.)

In determining whether as a document a patent is a sufficient description, the law implies a certain degree of intelligence in the reader, and, if there is some indefiniteness or ambiguity in the language, that he should read it in the light of his knowledge of the prior art. That the reader of the patent might be required to try more than once to get the result would not bring him within the doctrine of those cases which hold a patent insufficient where,

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in addition to the information contained in the patent, extensive experiments are essential to success. (Malignani *v.* Jasper Marsh Consol. Electric Lamp Co., 180 F. R., 442.)

It is not essential to the validity of a patent to insert in the drawings and specification a description of every detail. It is sufficient if the description is such as to enable a mechanic skilled in the art to construct the device patented. (Am. Delinter Co. *v.* Construction Co., 128 F. R., 709.)

A party should not be permitted to refer to another application for a disclosure of an invention or of a feature. Each application must be complete within itself, and the reference to the other case is permissible only in connection with a statement sufficient in itself distinguishing between what is old and what is new in the matter disclosed. (*Ex parte* Kellogg, C. D., 1906, pg. 84.)

Where a clear understanding of the mode of operation of the invention claimed in a divisional application cannot be had without a knowledge of an attachment to be used with it, the attachment should be shown and described in the application, and it is not sufficient to refer to another (parent) pending application for a disclosure of it, said (parent) pending application not being a part of the known art and not certain to become a patent. (*Ex parte* Scott, C. D., 1901, pg. 59.)

A statement in the specification which simply makes reference to the fact that a co-pending application shows a complete system of the kind with which the present invention would be used is not objectionable. (*Ex parte* Williams, C. D., 1912, pg. 288.)

Note. See matter in this paper entitled "The Specification Must Distinguish", etc., under Rule 36, for the case of a reference in the specification to a prior patent for the disclosure of a machine on which the present application is an improvement.

Where the result specified will not be produced by following the description the latter is insufficient.(Wolff *v.* DuPont de Nemours Co., 122 F. R., 944.)

If the description does not point out how the parts are to be constructed, severally or in relation to each other, so that a desired result may be attained, a mere description of the result is not sufficient. (Burrell *v.* Rumsey, C. D., 1878, pg. 170.)

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Doubtful and ambiguous specifications can be aided and made plain by drawings; but the latter cannot supply an entire absence of description of essential parts of the invention. (Gunn *v.* Savage, 30 F. R., 366.)

In an application for a process the inventor must describe some particular mode, or some particular apparatus, by which the process can be applied with at least some beneficial result. (Tilghman *v.* Proctor, C. D., 1881, pg. 163.)

The important thing is the method, not the particular means by which the method shall be practiced. If from the information found in the patent, those skilled in the art could execute the process by hand, or if enough is disclosed to indicate to them a mechanism, the specification is sufficient, even if no complete mechanism is pointed out. (Expanded Metal Co. *et al.*, *v.* Bradford *et al.*, C. D., 1909, pg. 521.)

When the specification of a new composition of matter gives only the names of the substances without stating any relative proportions, so that no one could use the invention without first ascertaining the proportions by experiment, the patent is void. The same rule prevails where the proportions are stated ambiguously or vaguely. (Wood *v.* Underhill, 15 How., 1, 5; Tyler *v.* Boston, 7 Wall., 327.)

Where the novelty of an invention consists in the dimensions or the material of the new thing devised, the patentee must specify the particular dimensions or the particular material his invention contemplates. (Bullock Electric Mfg. Co. *v.* General Electric Co., 149 F. R., 409), but in general it is not necessary to state exact dimensions and shape, even of essential elements. (Hallock *et al. v.* Davison *et al.*, 107 F. R., 482.)

A patent for a process is not void for failure to specify the proportion of materials if the proportion is not essential (Walnut Growers' Assoc. *v.* Mfg. Co., 166 F. R., 443), but where the successful operation of a device depends upon the proportion of parts, the specification is insufficient if it fails to specify the proportion. (Steward *v.* Lava Co., C. D., 1909, pg. 557.)

Where the maximum and minimum limits of quantity or degree are given in the specification it is sufficent if the result described is attained by the use of the mate-

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rials indiscriminately as to quantity or degree within such limits (Ajax Metal Co. *v.* Brass Co., 155 F. R., 409), but if the limits specified are so wide apart as to be misleading and impracticable the patent is void. (Eisenstein *v.* Fibiger, 160 F. R., 686.)

Clearness.

If there is any doubt as to the propriety of using a particular term to indicate a part, operation or condition which is susceptible of being expressed in clearer and less objectionable language, the latter should be employed. (*Ex parte* Gould, C. D., 1876, pg. 164.)

A specification which fails in any material respect to make the invention fully known and accessible to the public is fatally defective. (The Tannage Patent Co. *v.* Zahn, C. D., 1895, pg. 367.)

An applicant will not be permitted to use words in his specification that are likely to create an ambiguity in the strict construction of his claims. (*Ex parte* Petzold, C. D., 1892, pg. 39; *in re* Dilg, C. D., 1905, pg. 620.)

If the use of a proper name to designate an invention is permitted in the specification, it is only when the invention referred to has become known in the prior art by the name of the inventor or maker. (*Ex parte* Forbes, 4 M. S. Dec., Oct., 1889, 1 G. W. D.)

Conciseness—Prolixitiy.

Statements that the applicant does not regard his invention as limited to the exact details of construction are not superfluous if the claims are not so limited. (*Ex parte* Jansson, C. D., 1906, pg. 62.) They are nevertheless wholly unnecessary. (Crown Cork and Seal Co. *v.* Bottle Sealing Co., 217 F. R., 893.)

The applicant should not be required to cancel statements when such cancellation may result in a more limited construction of the claim than is necessary. (*Ex parte* Jansson, *supra.*)

Mere statements of well known principles of law are objectionable. (Id.)

Discussion of the theoretical result to be attained, while proper for advertising circulars, is not proper matter in a specification. A specification should be confined to a

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description of the structure of the device and the manner of its use. (*Ex parte* Wellington, C. D., 1904, pg. 564.)

Numerous examples illustrating the ingredients and proportions which may be used are unnecessary and render the specification prolix. (*Ex parte* Blakeman, C. D., 1902, pg. 25.)

Unfavorable comments were made by the court on prolixity in the specification in Victor Talking Machine Co. *v.* Hawthorne, C. D., 1910, pg. 435.

In *ex parte* Krause, Mar. 25, 1915, the then Assistant Commissioner held that thirteen lines setting forth the difficulties to be overcome and why the invention was made, legitimately pertained to the applicant's description of his invention and did not take up so much of the specification as to render it objectionable. (The application has now become Patent No. 1,198,039.)

Accuracy.

Accurate description is required: 1. That the Government may know what is granted and what will become public property. 2. That licensed persons may know how to make, construct, and use the invention. 3. That other inventors may know what part of the field is unoccupied. (Bates *v.* Coe, 98 U. S., 31.)

Absolute precision in the details is not required in the specification. It is sufficient if a mechanic skilled in the art, can from the specification and drawings, construct and use the invention described. (Dorsey Harvester Rake Co. *v.* Marsh, 6 Fish., 387.)

Sufficiency of the Specification Judged by its Intelligibility to Those Skilled in the Art.

The words "skilled in the art" include careful workmen who are skillful in the particular line of business in which they are engaged. The law does not warrant a construction of these words which includes only persons of high scientific attainments. (Pupin *v.* Hutin and Lablanc *v.* Stare, C. D., 1902, pg. 269.)

If the character of a new substance is so complex and intricate that everything to be found in it can not be told, the description is sufficient if it sets forth an exact mode

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of production that will not produce anything else, and if those who are able to produce it and those who use it have no difficulty in knowing or using it. (Anilin *v.* Higgin, C. D., 1878, pg. 335.)

A description was held sufficient without disclosing the character of celluloid sheets employed, when there was only one kind of celluloid sheets at the date of the patent which could be used for the purpose, and the mechanic had no need of more definite instructions. (Celluloid Mfg. Co. *v.* Am. Zylonite Co., C. D., 1887, pg. 519.)

Where only the case and a few minor features of one of the elements of a combination were shown in the drawing, and the specification merely stated that it was a "registering accountant", expert testimony was admitted to show that "registering accountants" were well known in the art and that only one machine was known by that name, and the disclosure was held to be sufficient. (Hopkins *v.* Newman, C. D., 1908, pg. 395.)

RULE 35.

The specification must set forth the precise invention for which a patent is solicited, and explain the principle thereof, and the best mode in which the applicant has contemplated applying that principle, in such manner as to distinguish it from other inventions.

The Specification Must Set Forth the Precise Invention For Which a Patent is Solicited.

In describing the invention itself, each of the essential parts must be clearly and exactly delineated, and the relation of each to the others definitely portrayed. (Robinson on Patents, Vol. II, Sec. 484.)

Where the invention consists entirely in a new combination of old elements or devices whereby a new and useful result is obtained, such combination is sufficiently described if the elements or devices of which it is composed are all named, and their mode of operation given, and the new and useful result to be accomplished pointed out, so that those skilled in the art and the public my know the extent and nature of the claims, and what the parts are. (Bates *v.* Coe, 98 U. S., 31.)

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The Specification Must Explain the Principle of the Invention.

This provision cannot mean that the inventor must infallibly explain the law of nature which makes his machine work; for, if it means that, neither Morse nor Bell complied with it when describing the telegraph or the telephone. The provision means that the essential distinctive characteristic of the machine shall be explained. (Walker on Patents, Section 115.)

In Section 4888 R. S. the requirement that the specification must explain the principle is limited to machines. The purpose of the requirement is to distinguish the new invention from other inventions. (Sec. 4888 R. S.; Union Sugar Refinery Co. *v.* Mathiessen, 2 Fisher, 600.) In Andrews *v.* Carman (C. D., 1876, pg. 373), where it was held that the claim might be construed as covering either a process or a manufacture, the term "principle" was treated as the mere unembodied idea or conception of the invention.

It is sufficient if any person, by using the invention as directed in the specification, will put such new principle into practice, although the specification does not state what such new principle is. (Andrews *v.* Cross, C. D., 1881, pg. 281.)

Where a patentee has invented and described a successfully operating machine, which accomplishes the results sought, it is immaterial whether or not his attempted description of the principles by which such results were attained is correct. (Nat'l Meter Co. *v.* Thomson Meter Co., 106 F. R., 531.)

When a patent contains a sufficient disclosure of the claimed invention, it will not be invalidated either by the failure of the patentee to state the causes which produce the operation or by a mistaken statement as to the reasons therefor. (Hemolin Co. *v.* Harway Dyewood & Extract Co., 138 F. R., 54.)

There must be no concealment of any power, or principles or fixtures, within the knowledge of the patentee, by which the machine could be worked more perfectly. (Page *v.* Terry, 1 Fisher, 298.)

In Union Sugar Refining Co. *v.* Matthiessen the court, after recognizing the duty of the inventor to explain the principle of the machine in order to distinguish it from

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other inventions, afterward instructed the jury to look at the mode of operation or the way the parts work, and at the result as well as the means by which the result is attained. It would thus seem that the principle of a machine may be deduced from a study of these phases of the invention. As to the mode of operation, they (the jury) were to inquire about and consider more particularly those portions of a given part or element which really do the work, so as not to attach too much importance to the other portions of the same part, which are only used as a convenient method of constructing the entire part or device.

In Andrews *v.* Cross it was held that the *scientific* principle, which is "only the why and the wherefore", may be omitted by accident or design without vitiating the patent. It may be omitted because the inventor does not know what it is. Substantially the same ruling was made in St. Louis Stamping Co. *v.* Quinby, C. D., 1879, pg. 502.

The theory of the operation of a patented invention need not be stated in the specification. (Eames *v.* Andrews, C. D., 1887, pg. 378.)

A patent need not describe in full all the beneficial functions to be performed by the parts of the machine if those functions are evident. (McCormick Harvester Co. *v.* Aultman & Co., C. D., 1895, pg. 754.)

The description is sufficient if the patent clearly describes the construction of the invention, although the philosophical principles which cause the improved result are not disclosed. (Dixon, Woods & Co. *v.* Pfeifer, C. D., 1893, pg. 411.)

Statements setting forth the purpose and function of the construction claimed are not objectionable and should be distinguished from laudatory statements inserted for advertising purposes. (*Ex parte* Schoshusen, C. D., 1905, pg. 214.)

The Specification Must Explain the Best Mode In Which the Applicant Has Contemplated Applying The Principle of the Invention.

This provision cannot mean that every inventor must infallibly judge which of several forms of his machine will eventually be found to work the best, for if it means

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that, it requires what is often impossible. The provision means that the inventor shall state the mode which he contemplates to be the best. (Walker on Patents, Section 115.)

To conceal the best mode for the benefit of the inventor and his licensee avoids the patent. (Dyson *v.* Danforth, 4 Fish., 133.)

This rule is closely related to Section 4920 R. S., which permits the defendant in an action for infringement to plead that for the purpose of deceiving the public the specification and description filed by the patentee was made to contain less than the whole truth relative to his invention or discovery, or more than is necessary to produce the desired effect.

If the patentee describes as essential a condition which will defeat the successful performance of the process, or omits an essential condition not implied by familiar knowledge of the art, this should not be overlooked in determining the sufficiency of the specification and the validity of the patent. (Malignani *v.* Jasper Marsh Consol. Electric Lamp Co., 180 F. R., 442.)

If the inventor has named all the essential conditions he should not be prejudiced because of error in also naming non-essential conditions. (Id.)

Where the inventor believed that he had invented a new process, and, in order to emphasize the novelty of the process so as to avoid rejection on an old process in which the use of phosphorus was essential, did not mention phosphorus in his specification or claims, the patent was held valid, although phosphorus was admittedly more suitable for the purpose than the materials he did mention. In this case the presumption of fraud was negatived by public disclosures made by the patentee at about the same time as the taking out of the patent, describing the process, including the use of phosphorus. (Id.)

RULE 36.

In case of a mere improvement, the specification must particularly point out the parts to which the improvement relates, and must by explicit language distinguish between what is old and what is claimed as new; and the description and the drawings, as well as the claims, should be confined to the specific improvement and such parts as necessarily cooperate with it.

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Applicants should not be required to "acknowledge" the subject-matter shown to be old by the references, nor, indeed to *acknowledge* anything else. If the examiner is of the opinion that the specification does not particularly point out the parts to which the improvement relates, or if it does not by explicit language distinguish between what is old and what is claimed as new he should so inform the applicant and require correction. (*Ex parte* Massicks and Crooke, C. D., 1887, pg. 20.)

Disclaimers in the specification of particular inventions or the subject-matter of particular patents are not required. (*Ex parte* Firm, C. D., 1887, pg. 27.) If made they must be explanatory of the claim and not contradictory to it. (*Ex parte* Hobson, C. D., 1872, pg. 20.)

The Specification Must Distinguish Between What is Old and What is Claimed as New. Derogatory and Laudatory Statements.

Where a patentee, after describing a machine, claims as his invention a certain combination of elements, or a certain device or part of the machine, this is an implied declaration as conclusive, so far as that patent is concerned, as if it were expressed, that the specific combination or thing claimed is the only part which the patentee regards as new. (Brown *v.* Guild, 6 O. G., 392.)

The inventor may begin at the point where his invention begins, and describe what he has made that is new, and what it replaces of the old. That which is common and well known is as if it were written out in the patent and delineated in the drawings. (Webster Loom Co. *v.* Higgins, C. D., 1882, pg. 285.)

In the case of an improvement on a patented machine it may be sufficient to refer to the patent and specification for a description of the original machine, and then to state in what the improvements on such original machine consist—whereas in the case of an improvement on a machine which is not patented it would be necessary to describe the original machine and also the improvement. (Evans *v.* Eaton, 3 Wash., 443.)

Note. See matter in this paper entitled "Necessary Fullness of Description", under Rule 34, for decisions

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concerning a reference in the specification to another pending application for further disclosure.

An applicant should under no circumstances be allowed in his specification to make derogatory statements as to the inventions of others, but within reasonable limits he may in pointing out the advantages of his invention indicate also what he regards as the defects or deficiencies common to structures representing the unimproved art, and in making this distinction he may state that his device is superior to preceding forms in certain respects. (*Ex parte* Heylman, C. D., 1907, pg. 29.)

Statements relative to the construction and operation of specific prior devices, made with the idea of pointing out the purpose and application of applicant's improvements, and without comparisons between those devices and applicant's to the disadvantage of the former, are not objectionable as being derogatory to the inventions of others. (*Ex parte* Ljungstrom, C. D., 1905, pg. 641.)

The statement "that the arrangement is an improvement over that of any prior construction" is obviously purely laudatory, and such statements have no place in the specification. (*Ex parte* Grieg, C. D., 1912, pg. 224. See also *ex parte* Blakeman, C. D., 1902, pg. 25.)

Descriptive matter which sets forth alleged advantages of the construction over the prior art in language broad enough to apply to a prior patent or patents, as well as to applicant's construction, is objectionable and should be cancelled. Such statements amount to merely a comparison of two old classes of machines. (*Ex parte* Kenney, C. D., 1905, pg. 546.)

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COURT-YARD OF THE PATENT OFFICE
(Photographed by T. L. Mead.)

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VOL. I. FEBRUARY, 1919. No. 6

EDITORIAL.

While awaiting with what patience we could command the announcement or appearance from some quarter of a formulated plan for the improvement of the patent system mentioned before in this department of the JOURNAL, we were cheered by the news that the Patent Committee of the National Research Council had made its report and that the President of our Society had received a copy. We hope to print this report, or the major portions, in our next issue.

Upon examination the report shows a painstaking review of the patent situation and a real effort to improve the same; it marks a long step forward and the com-

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mittee is certainly to be congratulated and commended for its labors.

Naturally a sizable section of the report deals with the needs of the Patent Office and recommendations are made for a very considerable numerical increase in the examining corps and material increases in salaries; it is this section that is of peculiar interest to the active membership of the Patent Office Society.

At the annual meeting, reported elsewhere in these columns, the report was referred to the executive committee for consideration and as we go to press, various sub-committees are discussing the various sections and recommendations of the report. It is planned to have the Society consider, in committee of the whole, whatever action is recommended by these sub-committees.

It appears very obvious that the action of the Society at this time should, in general, be in consonance with the report; it should not adopt a plan radically different from that adopted by the National Research Council. It is always a mistake to divide the forces in favor of a reform. It is presumed the Council will gladly consider suggestions which voice the united opinion of the Commissioner and the Society, especially if no radical change is made in the recommendations the committee of the Council has made.

A reform plan unitedly urged by the officials of the Patent Office and the National Research Council can not fail to receive the support of manufacturers and, with the help of the latter, the approval of Congress. The Council has pointed the way and begun to move forward; the Patent Office Society should fall in line with promptness and efficient help.

Attention is invited to the disclosure on another page of this issue of the fate of recommendations for an increased appropriation to improve the situation of clerks and draftsmen in the Patent Office. The article is published as interesting news and consists in the main of excerpts from the printed record of the hearing before the House Committee on Appropriations.

Editorial comment is withheld pending final disposition of the bill by action of Congress.

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THE PATENT OFFICE BUILDING.

The present Patent Office was built in accordance with the plan of William Parker Elliot, whose design was accepted by Congress July 4, 1836. Work was started on the main or south front July 12, 1836, and four years were taken to complete this portion of the building. Mr. Elliot was a mechanical draughtsman in the first Patent Office under the superintendency of Dr. William Thornton, resigning in 1829. President Jackson approved the plan but directed that the Patent Office be built on one side of the reservation laid aside for that purpose instead of in the central location assigned for it, because the President, to use the words of the architect, "did not wish to disturb the log cabin of an old squatter on the public land." "I observed," continued the architect, "that the plan covered the whole square, and that if his order was carried into effect it would destroy the plan. That rather than this should take place, I would give the old woman a residence as long as she lived. He said his order must be obeyed. The conversation as to the consequences of his order became rather angry. I left him in that mood, and myself disappointed." The construction of the building, however, was left to the judgment of the Commissioner of Patents and Commissioner of Public Buildings, who ordered that it be erected in accordance with the original plans. For once Andrew Jackson's will did not prevail, to the great benefit of symmetry and utility.

The main building of the Patent Office was occupied in the spring of 1840. Its cost was $422,000 and was provided for from the funds earned by the Office. The growth of the business was so rapid that on Mar. 3, 1849 Congress authorized the construction of the east wing, the one fronting on Seventh St. It was completed and occupied in 1852 and cost $600,000, $250,000 of which was taken from the earnings of the Patent Office.

On Aug. 31, 1852, Congress provided for the erection of the west wing, along Ninth St., which was completed and occupied in 1856, and cost $750,000. The north, or

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G Street wing, was begun in 1856, and entirely finished in 1867, and cost $750,000, thus completing the quadrangle.

The completed building occupies two city squares, 403 by 274 feet, with an open court of 264 feet long by about 106 feet in width. The main or south front is built of sandstone and is provided for its whole height with a semicircular projection extending into the court which comprises the housing of a staircase and forms the principal architectural feature of this aspect of the structure. The remaining wings are built of granite and are in harmonious relation with the original wing.

The architecture of the building as given by the architect himself is related by Robert W. Fenwick, Esq., as follows:

"The order of architecture adopted for the exterior was the Grecian Doric of the age of Pericles, when the fine arts in Greece, particularly architecture and sculpture, had reached the highest points of excellence. The details are modeled after the celebrated Parthenon, erected on the Acropolis at Athens, one of the finest specimens of Athenian architecture, and which was in 1827-'28, in part still standing, although more than 2,000 years had passed since its erection; and before it, in his early manhood, the architect of the Patent Office stood, and by it had his genius so kindled into a living flame, that he was enabled, on his return to his native land, to reproduce some of its most striking parts in his design for our noble Patent Office structure. At that date the marble of the ancient building had indurated to such a degree from its long exposure to atmospheric influences, as to resist the action of a chisel. The principal front of the Patent Office on F street is graced with a portico of sixteen columns, octastyle arrangement, the columns, and entablature, and pediment being of the size and proportion of the Parthenon, each column being 18 feet in circumference at the base. * * * * * The whole building is surrounded with bold *antae* or pilasters let into the external walls, which produce nearly as rich an effect as the isolated frustum of cone columns, and are much stronger and serve also as buttresses to resist the thrust

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of the arches. The entablature is continuous and surrounded by a blocking course, which finishes the superstructure. The windows are arranged between pilasters. The north front on G street is the same as the south front on F street, except that the inner columns of the portico are omitted. The east front on Seventh street is graced with a portico of six columns which tends to break the too great monotony of the extended facade. The west front is relieved by a similar portico. This portico, owing to the position of the ground on the west, rests upon a vaulted terrace from which it is approached. The cellar story under this side of the building has, owing to the low grade of Ninth street, a greater height. A horizontal terrace or pavement surrounds the whole structure from the curb line. A handsome ornamental railing with gates encloses almost the entire building."

In 1867, at the time the building was being completed, one of the Washington papers rose to the occasion in these words:

"The entire completion of the Patent Office building is now near at hand. Yesterday the portico on the North front was finished, and now there remains but the granite steps on the North front and the pavement on G street to be done, and this building, claimed to be the most handsome in the world, so far as architectural proportions are concerned, will be, when completed, a standing monument to the architectural talent and mechanical ability of the country."

The frontispiece illustrates some of the beautiful and monumental details of the structure and the very impressive character of the court sides of the building, and gives a graphic indication of its beauty, symmetry and imposing architecture. While it is not necessary to go so far as to claim the building as the "most handsome in the world," it is generally admitted to be one of the best proportioned, monumental and dignified structures in the national capital, an ornament to the city and a credit to the architect.

W. I. W.

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EX PARTE THOMAS.

By ARTHUR W. COWLES, Examiner.

May not the following perhaps reasonable deduction be made from the able papers of Mr. Dodge, Mr. Cox and Mr. Glascock, and certain sections of the Patent Law?

Apparently the Patent Law intends to give a patent in exchange for a patentable addition to the total sum of information possessed by the public, and its manipulative capacity within the art; an addition to the total of known things, and any arrangement of those things within the art. The refusal of a patent is apparently an attempt to protect the public in its possession of such information and manipulation; in its knowledge of such things and such arrangement.

Various sections of the statute state the requirements for the proper preparation and prosecution of an application. Among these is the requirement of sufficient disclosure of the new information involved, Sec. 4888; and the requirement that an applicant "shall make oath that he does verily believe himself to be the original and first inventor" of the matter embodying such information, Sec. 4892.

An apparent deduction from these two requirements is that the law intends that a patent shall be given to the original and first inventor of the matter concerned if he shall properly disclose it to the Office, shall indicate by his petition, his intention to disclose it to the public, and shall fulfill the other statutory requirements. But the original and first inventor may not show evident intention to disclose the matter to the public, or may not show that intention with the due diligence required under certain established interpretation of the law. Therefore apparently the law intends to give a patent to the earliest inventor who with due diligence discloses the invention to the Office in an application for a patent and satisfies the other conditions concerned with an application, including a claim to the invention. The lack of sufficiently early invention, the lack of due diligence in

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appearing at the Office, or the lack of a claim to the invention, the lack of presumptive evidence of intention to disclose the invention to the public, as by allowing the application to become forfeited or abandoned; any one of these conditions is sufficient to justify refusal of a patent while the condition exists.

In the case under consideration, an applicant may have satisfied the two formal requirements above as to sufficient disclosure and as to his oath and all other conditions precedent to the granting of a patent, including the avoidance of published art, excepting that the Office may have prima facie unpublished evidence that the claiming applicant is not the original and first inventor. That evidence may be in a forfeited or abandoned application having an earlier filing date than that of the claiming application and disclosing the same or equivalent matter, or disclosing and also claiming it. But a forfeited or abandoned application lacks the presumption that its applicant intends to inform the public of the invention disclosed, or disclosed and claimed.

There may be, however, a pending application which discloses the same or equivalent matter or which both discloses and claims such matter. If the matter is both disclosed and claimed there is consideration of an interference proceeding to determine who is the earlier inventor, the results of such consideration varying according to the specific interference practice existing at the time.

But the pending application may only disclose the invention of the claiming application. It is believed that under some former interference practice it was the custom to suggest to such a disclosing applicant, regardless of his filing date, that he claim the disclosed matter if he wished to contest its ownership; a practice perhaps based on the theory that the disclosing applicant might be in fact the original and first inventor of the matter he merely disclosed, and might have decided to give the information of it to the public without reward; or that if he were not the original and first inventor of it, his knowledge of it might lead him to give the Office published information of it on which the Office could reject the claiming application. Thus the Office believed itself

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to be fulfilling the duty broadly incumbent on it to use all means reasonably at hand to avoid the grant of a possibly invalid patent. This practice does not now exist.

(It may be said that the statutory requirement that the Commissioner shall institute interference proceedings when, "in his opinion," an application "would interfere" with another application or with a patent, allows such breadth of discretion to the Commissioner that the interference practice has varied within wide limits, all apparently properly bounded by the statute. So that perhaps the specific interference practice prevailing at a particular time ought not to be of much weight in determining the legality of any specific form of rejection under Rule 75.)

But if the disclosing application has a filing date earlier than that of the claiming application the Office has prima facie, though unpublished, evidence that the claiming applicant is not the original and first inventor, and also prima facie evidence that the disclosing applicant intends to give information of the matter concerned to the public. But under prevailing practice, if the claiming application is otherwise in condition for approval while the disclosing application is still only pending, the Office grants a perhaps invalid patent.

But if the disclosing application matures into a patent while the claiming application is still pending the new information has been given to the public and the Office now has prima facie evidence that the claiming applicant is not the original and first inventor, and evidence in fact that the matter was disclosed to the Office at a date earlier than that of the claiming application by one who apparently intended to disclose it to the public, though without reward; and that the disclosure to the public has actually been made.

To grant a patent to the claiming applicant would therefore be to allow him to demand royalty from one who apparently knew of the matter earlier than the claiming applicant, who disclosed it to the Office earlier than the claiming applicant, and who disclosed it to the public earlier than the claiming applicant. And the disclosing applicant apparently represents the public, in-

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deed is the public, just as fully as would be a hundred or a thousand applicants with applications having earlier filing dates than that of the claiming application, and disclosing but not claiming the matter or its equivalent.

It is difficult to see what the claiming applicant has to give to the public in exchange for the monopoly he demands.

Further, why does not the disclosing patentee stand in broadly the same relation to the claiming applicant, as the winning party to an interference does to a losing party in that interference?

The concerned claims of the losing party to an interference are rejected on the claimed embodiment of the winning party because the Office has evidence that the losing party is not the original and first inventor. And this rejection is given although the Office does not certainly know that the winning party will give to the public the information furnished by his claimed embodiment, because it is possible that the winning party may not take out his patent. The Office merely presumes that he will because he has apparently prosecuted his application with that object in view.

In the case at hand the disclosing patentee has in fact informed the public at the time the Office considers the propriety of rejecting the claiming application on that evidence.

And is there not a still closer likeness between the winning party to an interference and a losing party to that interference?

The winning party to an interference obviously has the legal right, as against a losing party to that interference, to use his own claimed embodiment either in its specific form, or modified within the art, or in coöperation with anything else known in the art. The losing party in the interference was allowed his claim ex parte because it patentably avoided the total sum of information possessed by the public together with the manipulative capacity of that information within the art. The losing party is now confronted with that information and its manipulative capacity increased by the information furnished by the claimed embodiment of the

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winning party; that is, by a new and enlarged total sum of information and its manipulative capacity within the art; and must patentably avoid it. Therefore the losing party's claimed matter involved in the interference may be properly rejected, either on the winning party's claimed embodiment in its specific form, or modified within the art; or on that embodiment cited as primary art in connection with secondary art taken from known art; even on cited known art as primary art in connection with the winning party's claimed embodiment cited as secondary art.

Only so can the Office obey the apparent intention and implication of the Patent Law that every patent granted shall be patentably distinct from every other patent granted.

And, obviously, also, the disclosing patentee has the presumptive right, as against the claiming applicant, to use his disclosed embodiment in its specific form, or to use any modification of it within the art, or to use it in coöperation with anything known to the art. Therefore, here again, the claiming applicant, whose claim may patentably avoid known art except that furnished by the disclosing patent, is confronted with a new, enlarged total sum of information possessed by the public and its manipulative capacity within the art. And the Office may properly reject the claiming application, either on the specific embodiment disclosed in the patent; or on any modification of it within the art; or on the disclosed embodiment as primary art in combination with known art as secondary art; or may use other known art as primary art in construction with the disclosed embodiment as secondary art. Otherwise every patent granted might not be patentably distinct from every other patent granted.

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SPECIAL PATENT LIBRARIES.

BY WILLIAM D. SHOEMAKER.

A special library, so called for lack of a better title, is one devoted to a particular purpose or object, to a particular line of thought or activity. Numerous individuals and corporations maintain special libraries, some in the nature of valuation libraries for brokers and banking concerns, others technical, as the libraries of the General Electric Company and the Westinghouse Company and the library which these two companies maintain jointly.

The librarians of these special libraries have a national organization and publish a journal and other papers. For a general discussion of the subject of special libraries reference might be had to a paper by Mr. R. H. Johnson of the Bureau of Railway Economics Library in this city.

It is the purpose of this paper to point out in a general way only what has been done in the preparation and maintenance of libraries of this character devoted to patents.

The records of the Patent Office constitute a special library of domestic and foreign patent information for all the industrial arts of the country, and the classification of patents as now practiced is the work of arranging this patent literature in a convenient and usable manner to satisfy the inquiries concerning patents propounded by all the industrial developments of the nation. It is not pursued with a view to satisfying the needs of a single corporation, as would be the case in a library devised specially for that corporation, nor to satisfying the needs of special groups of corporations. It is therefore not surprising that occasionally special interests do not find the records of the Patent Office suited to their every need. If they were, they would probably fall far short of satisfying the ordinary demands of many other special interests.

Many of our large manufacturing concerns maintain patent departments, in which are gathered together the patent literature, foreign as well as domestic, of the arts

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in which they are interested. This is not confined to single corporations, but special collections of patent literature are now maintained by groups of corporations, as the Eastern Railway Association, the Western Railway Association, the Automobile Chamber of Commerce, etc.

A special library of patent information best suited to a single industry or to the needs of a single corporation may be styled an art library, and the classification of patent literature to be found there would probably be based upon the particular industrial art involved. The need of such libraries is evident from the ever increasing number thereof, and the Government while not chargeable with the duty of organizing them might nevertheless aid in a measure others who are engaged upon the work. Certain branches of the Government have from time to time compiled patent literature concerning special arts, as will be noted hereinafter. Each individual, corporation or industry must, however, be primarily chargeable with the compilation of the patent literature of special interest to it.

While the Patent Office does not make a special point of collecting art patent literature, many individual members of the examining corps have supplemented the Office classification by collections of patents upon an art basis, which have served admirably the needs of special inquiries besides being of considerable value for the novelty searches made by the particular examiner. The reason why these special collections are not more used are the inexperience of the examiner in work of this kind, the individual ideas incorporated in such work as is done, and the consequent lack of uniformity in the resultant product. That there is great need of some systematic effort in this line is felt by examiners, attorneys and manufacturers, as a supplement to the official classification.

From time to time, various bureaus of the Government have compiled and published patent information concerning certain arts. Among such activities might be mentioned the compilations of the Census Bureau some years ago of patent literature concerning industrial chemistry. In the Second Annual Report of the National

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Advisory Committee for Aeronautics may be found a rather comprehensive collection of United States patents upon carburetors, comprising lists of the patents according to the Patent Office classification and a complete reclassification upon so-called art lines. There are other instances of work done by the Government in this line.

Of the work now in progress might be mentioned that which is being done by the Bureau of Chemistry in compiling an art classification of all patents upon dyes, wherein those patents will be arranged upon six different bases, and that which is contemplated by the Enemy Trade Division of the Federal Trade Commission, wherein a collection of unexpired United States patents issued to residents and corporations of Germany and Austria-Hungary will be arranged according to the official classification of the Patent Office.

Occasionally individuals have invaded this field and published compilations of patent literature for profit. Noable among these might be mentioned the late James T. Allen, first assistant examiner in the Patent Office, who compiled several digests, a number of which were sold and are now in use.

By far the greatest amount of work and the most valuable has been done in the patent departments of manufacturing concerns, where extensive art collections of both domestic and foreign patents are to be found, as well as periodicals, circulars, trade publications, etc., relating particularly to the lines of manufacturing of the factory. Such a department is usually presided over by a patent lawyer, who is assisted by an ample force of technical and clerical assistants, and is provided with a sufficient legal library. There is no place where special patent information is more readily obtainable, not even in the examiner's rooms at the Patent Office. The facilities for answering questions involving patents are all that money, time and effort could produce; in one instance, where the collection involved only about 5000 United States patents, there were some 30,000 cross references, and the head of that department was able to render an opinion upon the question of infringment in about an hour. The Board of Directors of that company could make a decision concerning a change in structure of its

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patented product at the same meeting at which it was proposed.

A rather complete discussion of the physical organization and the duties of a manufacturer's patent department is to be found in the Engineering Magazine for July, 1914.

Many of the public libraries of the country have established patent branches, where much published patent literature is kept in available form. In the well equipped patent room of the New York City Library may be found bound volumes of United States patents, many foreign patents, the British abridgements, etc. In charge of these branches are librarians who are somewhat familiar with the official publications relating to patents. It is not known that any of these libraries have made special collections of patents, however, not even to the extent of duplicating some portion of the classified arrangement of patents to be found in the Patent Office.

The possiblities of special patent libraries or collections are without limit; at least, the surface has only been scratched. Reference has already been made to the well equipped manufacturers' patent departments, but these have been built with a view to supplying the needs of the particular owner only. Libraries of this type, designed for public use, are practically limited to those facilities provided by the national Government, and for the most part to those found at the Patent Office. There would appear room for others, perhaps located at a distance from the National Capital, as for instance a special collection of automobile patents at a public library in the city of Detroit.

There are manufacturing corporations whose unexpired patents will aggregate a thousand or more, and in some few instances several thousand. A list of the patents of such a company arranged according to the official classification of the Patent Office, would be of rather general interest, and of great value to the large number of manufacturers who are in competitive contact with such a concern. But such a collection of patent information is hardly of sufficient immediate value to any single competitor to warrant the expenditure of the cost of compilation.

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Again, there are inventors who have taken out a large number of patents. There are times when a list of their individual patents together with accurate information as to the present ownership of each thereof might be of great value.

In view of the large annual increase in the number of patents, and of the increased number of unexpired patents, necessitating an ever extending field of search, is it not evident that curtailment of the actual time and effort spent by examiners and attorneys in making searches is imperative? Cannot this be done by the more general use of special collections of art patent information so that the actual technical work involved shall be confined to the perusal of the fewest number of patents? Should not the records of the Patent Office be subjected to a study with such an object in mind?

Might I not suggest that sometime in the near future there will exist a branch of the "Special Librarians" national organization devoted to the subject of special patent collections, and that the heads of manufacturers' patent departments and certain officials of the Patent Office and other branches of the Government will be members of that organization; and further that a plan will be devised whereby the libraries of the country will take up the compiling of patent literature of particular and special interest to their section of the country?

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INTERNATIONAL USE OF PATENT SEARCHES.

By SCOTT H. LILLY, Assistant Examiner.

The Director of the Canadian Patent Office, in an address before the employees of the United States Patent Office, expressed the wish that his office might have the benefit of searches as to novelty made in the United States. He stated that the great majority of applications filed in Canada are filed in substantially the same form in the United States, and in these cases one search as to novelty should be sufficient, and that the one search could be more efficiently made in the United States, where the facilities for search are better.

That wish might be realized if the Canadian Office would forward to the United States each application filed, for a report on its novelty. Where a corresponding application had been filed in the United States the report would require little but the copying of the citations made as a result of the previous search, and in other cases the report could be kept available for a subsequently filed application, so that in the majority of cases little extra work would be entailed in preparing such reports. It should be easy to set a price for such reports, which would be much less than the cost to Canada of making searches as to novelty and still would more than cover the cost of the extra work of preparing the reports, so that the arrangement would be mutually advantageous.

Making searches in two offices where they could be confined to one, not only duplicates the work of searching such applications as are presented in duplicate, but it duplicates the cost of providing facilities for searching and lessens the efficient division of labor amongst searchers. Probably a greater proportion of the applications in the Canadian Patent Office than in any other are duplicated in the United States; but it seems worthy of investigation whether, considering both work and plant, it could not be made profitable for the United States to report as to novelty not only to Canada but to England and her other colonies having patent systems.

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Now, when the full efficiency of every man is needed and coöperation in other lines between Great Britain and the United States is being extended, should be an auspicious time for inaugurating coöperative searches as to novelty.

After returning from South America former Commissioner Moore related that a number of representatives of South American countries had expressed their appreciation of the advantages of a patent system, indicating that their countries appreciated the difficulties arising from the grant of patents without search as to novelty and the great cost of a plant in which such searches could be made with any reliability. If the opportunity were properly presented, South American countries might gladly avail themselves of reports as to novelty made by the United States.

The more countries use one office for novelty reports the cheaper can they be made. With many countries using the reports of one office a report as to one invention may be used not only twice but many times, so that the cost for each use of the report is reduced.

Our facilities for searching are far from perfect. Making greater use of the facilities we have would make increased expenditures in perfecting them more reasonable to everyone, not excepting Congress, so that increased use should make it possible for the work to be done with less cost for each application and with greater reliability.

The logical first step seems to be to learn as nearly as possible the proportions of Canadian applications duplicated in the United States and in what respects, if any, the information as to novelty desired by Canada differs from that required in our system. Then an estimate of cost could be made and a definite offer presented to Canada. The logical ultimate goal would seem to be, not only a pan-English speaking and pan-American office, but a highly perfected plant and force justly maintaining itself as the authority on novelty for the whole world.

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CHANGES SOUGHT IN APPROPRIATIONS FOR THE PATENT OFFICE FOR NEXT YEAR.

The following statement was placed before the subcommittee of the Appropriations Committee of the House having in charge the legislative, executive and judicial appropriation bill:

Increase in Salaries.

Patent Office.	Present salary	Proposed salary	Increase
Assistant Commissioner	$3,500	$4,000	$ 500
2 Chiefs of clerical divisions		2,000	4,000
5 Assistant chiefs of divisions		1,800	9,000
3 clerks of class 4		1,800	5,400
3 clerks of class 3		1,600	4,800
13 clerks of class 2		1,400	18,200
1 skilled draftsman	1,200	1,600	400
2 skilled draftsmen	1,200	1,400	400
4 draftsmen	1,000	1,200	800
14 copyists		1,000	14,000
Total			57,500
Less 40 clerks at $720			28,800
Net increase asked for			28,700

The total number of employees provided for the Patent Office by the legislative, executive and judicial appropriation bill for the fiscal year ending June 30, 1919, is 959. The estimates above submitted make no change in this total number of employees but propose a number of changes in grades and salaries.

It will be observed that all the changes submitted, excepting only the Assistant Commissioner's position, appertain to clerical positions in the Patent Office.

The duties of the Assistant Commissioner of Patents are very similar and substantially commensurate with those of the First Assistant Commissioner, who quite properly receives $4,500. An increase of $500 for the Assistant Commissioner would more equitably compensate him for the services he renders.

In regard to the remaining proposals, touching clerical positions, it may be said frankly that they are made in view of a growing state of dissatisfaction and unrest in the Patent Office. The clerks in that office, almost without exception, believe that clerks in other departments uniformly receive higher salaries for similar

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work, and in many instances for work less exacting and requiring less training and skill. They are told every day that wholly inexperienced young girls in large numbers are called to this city and appointed at $1,000, $1,100, $1,200, and sometimes higher salaries, with promises of promotion in from three to six months. It is not difficult to imagine the effect upon the minds of those who day after day hear of these instances and who are themselves able to verify a sufficient number to justify a belief that all rumors are true.

In drafting the above-noted proposals for increases in salaries not only the cause of the clerks but also the general betterment of the Office has been kept in mind.

The reason for asking for two additional chiefs of clerical divisions is that the application and docket clerks of the Patent Office are each in an administrative position, exercising immediate supervision over approximately 10 to 15 clerks. Each should be made the chief of a division, one to be known as the Application Division and the other as the Docket Clerk Division.

If the above suggestion be adopted the Patent Office will have eight clerical divisions and it should have an assistant chief for each of these divisions. It now has only three assistant chiefs of divisions for six clerical divisions. It asks an increase of five assistant chiefs.

At the present time, counting all possible places, there are only 45 clerical positions in the Patent Office to which a clerk receiving $1,200 can hope to aspire by promotion. In fact there are practically less from the point of view of a female clerk for it has never been the custom to promote a woman to the position of chief or assistant chief of a division. To open up a prospect of promotion to those who are receiving $1,200 request has been made for three additional clerks of class 4, three of class 3, and 13 of class 2. These particular changes are regarded as especially desirable and all but indispensable to the future welfare of the Office.

Also there is recommended an increase of 14 clerks at $1,000. The Patent Office has experienced great difficulty of late in getting suitable clerks who have passed the civil-service examination to accept appointment at $900 per annum, and this would be quite impossible but for the $120 additional compensation provided by the appropriation bill for the current year.

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A more regrettable feature in the situation is the fact that the Civil Service Commission does not submit to the Patent Office the names of the most competent clerks or typists who pass its examinations when called upon for certification to fill $900 positions. This is due to no fault of the commission but arises from the fact that the commission certifies as a rule only the names of persons who state in their examination papers that they will accept $900 or less. The better class of clerks and typists state in their papers that they will accept $1,000 to $1,200, and these are naturally certified to departments that pay corresponding salaries to new appointees. A very large number of those who accept $900 positions in the Patent Office seek releases shortly after beginning service, and several have presented resignations to accept positions at higher pay outside the Government service. The only remedy seems to be to provide salaries for this office corresponding to those paid elsewhere.

The above proposals call for 40 new places in grades paying more than $720 per annum. The Patent Office has a grade of coyists at $720 with 40 positions in that grade. It is desired that that grade be entirely discontinued. Only five of the bureaus in the Interior Department have such a grade and of these the Patent Office employs seven more copyists at $720 than the other four bureaus combined.

The statement has been made that the Patent Office employs nearly one-half of all the $720 copyists serving in the entire departmental service.

Dropping the $720 copyist grade in the Patent Office is recommended also for the reason that in that office for two years at least it has been filled, almost without exception, and is now entirely filled, by temporary employees, possessed of the most indifferent qualifications. The Civil Service Commission makes no attempt to certify names for this grade and it has been possible to fill or partially fill these positions only by accepting those who have but nicely begun, or at best have just finished an elementary course in typewriting. Several of the employees in this grade are too young to take the civil-service examination, and of all of them it may be said

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that, taken on an average, it requires two and a half to three of them to do the work of one good typist. Dropping this grade will reduce by $28,800 the salary increases otherwise proposed, leaving a net increase of but $28,700.

The estimate for special and temporary typewriters for which the current appropriation bill provides $5,000 has been omitted this year in the belief that the better grade of help which the above recommendations would insure, justifies this change.

Among the proposed increases of salaries are one of $400, and two of $200 each for three $1,200 draftsmen; and four of $200 each for four $1,000 draftsmen. A comparison of the salaries paid draftsmen in any other branch of the Government service with the salaries paid in the Patent Office will show the basis of this recommendation.

A table showing such a comparison prepared as far back as 1916 is here reproduced.

Branch of service.	Number draftsmen employed	Total salaries paid	Average	Highest salary	Lowest salary
Coast and Geodetic Survey	22	$37,600	$1,709	$2,400	$1,000
Office of Supervising Architect, Treasury Dept.	75	126,900	1,692	2,400	1,100
Quartermaster General's Office, War Dept.	15	24,000	1,600	1,800	1,400
Bureau of Ordnance, Yards and Docks, Navy Dept..	2	3,200	1,600	1,800	1,000
Fourth Assistant Postmaster General	18	26,200	1,445	1,800	1,200
Lighthouse Bureau, Department of Commerce	6	8,600	1,433	1,800	1,200
Division of Publications, Agriculture Department	13	17,500	1,346	1,600	1,200
Chief of Ordnance, War Department	52	69,600	1,344	2,200	900
Chief of Staff, Army War College	9	11,800	1,311	1,800	1,000
Indian Office	2	2,600	1,300	1,400	1,200
Forestry	35	44,020	1,257	2,000	900
Hydrographic Office, Navy Department	27	34,000	1,250	1,800	900
Grand total 12 branches.	276	405,320	1,472		

Patent Office: Seven men, average $1,085; two grades, $1,200 and $1,000.

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The Patent Office has had two vacancies in the $1,000 draftsman position for many months. One has been filled by a woman holding a temporary clerical position; the other has remained vacant and neither the Civil Service Commission nor the appointing officers of the Office have been able to find a sufficiently skilled person who would accept it. Those who at present are employed at this work are dissatisfied and some of them are asking to be released to take work elsewhere at higher pay.

The appropriations committee of the House reported the legislative, executive and judicial bill (H. R. 14,078) on January 10, 1919. From the section thereof devoted to appropriations for the Patent Office it appears that the Committee allowed two additional chiefs of divisions at $2,000 each. All other proposed changes for increases in salaried positions were denied and ten copyists positions at $720 per annum were dropped. Other changes noted include a reduction of $500 from the usual allotment for the Scientific Library; a reduction of $5,000 from the appropriation for producing the current issue of patents and reproducing exhausted copies, and a reduction of $5,000 for special, temporary typewriters.

The bill provides for continuing the payment of the lump sum bonus of ten dollars per month allowed last year to all civilian employees receiving salaries up to twenty-five hundred dollars per annum. Also it provides for a joint commission of five senators and five representatives of the Sixty-sixth Congress "to investigate the rates of compensation paid to civilian employees by the municipal government and the various executive departments and other governmental establishments in the District of Columbia except the Navy Yard and postal service, and report by bill or otherwise, as soon as practicable, what reclassification and readjustment of compensation should be made so as to provide uniform and equitable pay for the same character of employment throughout the District of Columbia in the services enumerated."

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THE TREATMENT OF DEFECTIVE CLAIMS.

By LOYD H. SUTTON.

It has been my observation through a number of years of experience, both in examining claims within and in prosecuting claims before the Patent Office, that there is neither uniformity of practice, nor clear appreciation of principles on the part of many of the examining corps, as to the treatment of claims that are defective in respects generally called "formal". It is my purpose to point out, by an analysis of decisions and underlying principles, considerations that, in my opinion, should govern the treatment of such claims. It is recognized at the outset, however, that no rules can be laid down which will be of universal application: the leven of common sense must enter into the application to particular cases of any rules that may be derived.

We sometimes hear it stated that the examiner, in dealing with claims, should devote his entire attention to matters of substance, and not consume time on matters of form, because the courts look only to matters of substance and never invalidate claims because bad in formal respects. But such statements, however true in the main, afford no assistance in determining what relates to substance and what relates only to form. On the other hand, while substance should never be sacrificed to form, and while the examiner should not be hypercritical or over-technical in dealing with form (because too much attention thereto is usually attended by too little attention to substance), it is a mistake to disregard defects which we usually refer to as "formal." Much time now consumed by the Courts in construing claims could be saved if closer attention were given to their manner of expression, and a much clearer and more accurate concept of the scope of the monopolies granted could be obtained by the public were all claims properly drafted. Therefore, while a court in dealing with a defective claim may seek to save to the meritorious inventor the fruit of his genius and disregard an informality, it is none the less the duty of the Patent Office to see that

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the patent issues with its claims in such form as to require the minimum of construction on the part of the courts and the minimum of confusion on the part of the public. It is my purpose, then, not only to seek uniformity in dealing with defective claims, but also to urge a treatment of them that will tend to the issuance of better definitions of the inventions.

Revised Statutes, Sec.4888, says that the applicant for a patent "shall particularly point out and *distinctly* claim the part, improvement, or combination which he claims as his invention or discovery." It is the duty of the examiner to see that each applicant complies with this statute. Now, what is it to claim an invention "distinctly"? In the plain dictionary significance of the term, it is to claim the invention "not confusedly, unclearly or obscurely," not in a "blurred or indeterminate" manner, but "so as not to be confounded with something else," so as to be "clearly distinguishable"; in other words, to be "well-defined" so that the invention can be "clearly perceived."

The statute prescribes then, as one of the conditions precedent to the grant of a patent, that the invention described therein and to be protected thereby shall be defined distinctly. If an applicant does not comply with the statute in this respect, it is just as much the duty of the examiner to reject his claims as it is to reject for failure to comply with other statutory conditions precedent, as lack of invention, novelty or utility. On the other hand, when the statute has been complied with and a claim is defective only because it fails to measure up to qualifications prescribed by the Office in the exercise of its administrative functions, it should receive an objection. This distinction should be kept well in mind because a claim which is said to lack a statutory prerequisite is entitled to receive a judicial review which can be obtained only by appeal, while a claim which is said not to comply with the administrative policies of the Office should be disposed of by the Commissioner in the exercise of his supervisory authority. What is appealable should be rejected and what is petitionable should receive an objection.

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Misdescriptive or Inaccurate Claims.

Assume a description of a squared shaft and a pinion having a square hole mounted on said shaft, together with a claim which defines the pinion as keyed to the shaft. This is clearly inaccurate or misdescriptive. If such claim be first presented by amendment, it may be rejected as a departure from the invention originally shown and described. Such is the practice of some examiners, which finds support in *in re* Duncan *et al.*, 1907 C. D., 460, and is suggested in *ex parte* Williams, 1912 C. D., 288. Yet, as it presents a question "as to the meaning of language used to describe an undisputed structure and not whether the disclosure includes certain elements clearly covered in the claims," the latter decision rules that the question is petitionable. On the other hand, inaccuracy of definition may properly be considered by the Examiners-in-Chief on appeal, as recognized in *ex parte* Brasier, 1906 C. D., 517. Now, suppose that this same claim were presented in the application as filed. It clearly could not be rejected for a departure from the invention originally disclosed, and yet the defect is the same as in the case first assumed. Under the latter circumstances, *ex parte* Mueller *et al.*, 1905 C. D., 336 and *ex parte* Taylor, 17 Gour., 39-18, rule that the claim is to be objected to. A claim, however, that is inaccurate or misdescriptive is not patentable (*In re* Creveling, 1905 C. D., 684); and while held objectionable by several decisions besides those already enumerated (see *ex parte* Conley, 1904 C. D., 13; *ex parte* Chapman, 1906 C. D., 79; *ex parte* Reid, 13 Gour., 70-17; *ex parte* Scott, 15 Gour., 38-19), the defect is one that goes to the merits (*ex parte* Parkhurst, 1902 C. D., 343) because relating to particularity of definition (*ex parte* Iserman, 1913 C. D., 61).

A claim that does not accurately describe the invention does not distinctly point out the invention, at whatever stage of the prosecution of the application it is presented. The defect is statutory, and such a claim should accordingly be *rejected.*

Alternative Claims.

It is the policy of the Office not ot permit a single

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claim to cover two inventions, similarly as it is the policy of the Office not to permit a single application to claim two independent inventions in different claims. But this policy does not inhibit the use of the word "or" in a claim, as appears to be the impression of some examiners.

Alternative claims may be divided into four classes:

(1) Where the alternativeness is of language and not of structure.

Sometimes the character of a single element may be more clearly expressed by the use of alternative names. Strictly speaking, such may be unnecessary; but if a clearer idea is conveyed thereby, their use should not be held objectionable. Such is recognized in *ex parte* Leon, 1911 C. D., 35 (button or handwheel); Phillips *v.* Sensenich, 1908 C. D., 14 (slitted or pronglike); and *ex parte* Holder, 1903 C. D., 442 (rods or wire); *ex parte* Caldwell *et al.*, 1906 C. D., 58, in its dictum, being to the contrary.

(2) Where the alternative expression relates to duplicate elements.

A claim that includes one of a plurality of duplicate elements is generally held to be infringed by a structure that comprises more than one of such elements. It may be argued then that, in the expression "one or more," the "or more" is purely superfluous. On the other hand, the use of this expression shows clearly that the number of these elements is not of the essence of the invention; it automatically eliminates the multiplication of claims by the addition of others differing only in the inclusion of a plurality of such elements; and it does not offend against the Office policy with respect to the inclusion of more than one invention in a single claim. No practical reason is then seen why such expressions as "one or more" should not be permitted (as was done, for example, in *ex parte* Thorsen, 1893 C. D., 75).

(3) Where the alternative expression relates to equivalent structures.

A claim is always entitled to a construction which embraces equivalents. Therefore the use of such expression as "or its equivalent" serves no useful purpose and is purely superfluous. While this reason by *ex*

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parte Haasz, 1873 C. D., 170 is a sufficient ground for objection, there is a deeper reason why this type of claim offends the Office policy in question. An applicant is not entitled to separate claims to different modifications of his inventions although they are equivalents. He should not, then, be allowed to claim in a single claim what he would not be allowed to claim in different claims (*ex parte* Cook, 1890 C. D., 81). Yet a claim for an element or its equivalent is an effort to have that claim embrace a plurality of structures which differ by the substitution for the element in question of other elements which perform the same office in the combination. This type of claim should always be objected to (*ex parte* Phillips, 1908 C. D., 195). While permitted in *ex parte* Continental Windmill Co., 1870 C. D., 74, *ex parte* Walton, 1876 C. D., 162, and *ex parte* Dolph, 1887 C. D., 25, it has usually been held objectionable. As pointed out in *ex parte* Caldwell *et al.*, 1906 C. D., 58 (or the like), a generic expression should be adopted which embraces the equivalent structures.

(4) Where the alternative expression relates to non-equivalent devices.

Such claims clearly offend against the Office policy in question and should accordingly always be objected to (*ex parte* Hulbert, 1893 C. D., 74; see also *ex parte* Leon, 1911 C. D., 35).

It is to be noted that some decisions find alternative claims defective for other reasons. Thus *ex parte* McDougall, 1880 C. D., 147, and *ex parte* Reid *et al.*, 1879 C. D. 70, find them bad for uncertainty, *ex parte* Haasz for equivocality, *ex parte* Fretwell, 20 Gour., 85-12 and *ex parte* Caldwell *et al.* for indefiniteness. If these reasons actually exist, the claims should be rejected on such grounds, but it is believed rare that alternative claims *per se* are open to such attack.

Positive Inclusion of Elements.

If the invention is to be *distinctly* defined, it must of necessity be clear from the claim what elements go to make up the invention, i. e., what part of the disclosure is staked off and embraced within the monopoly. If it is not clear what elements are embraced by the claim,

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the latter does not distinctly define the invention and, not complying with the statute, should be *rejected.*

We have the rule that all elements *of the invention* must be positively included in the claim. "Every instrumentality or substance *intended to be an element or ingredient* of a claim must be directly brought in as such, not inferentially included, or only alluded to in naming some other" (*Ex parte* Holt, 1884 C. D., 43). But this rule does not require that every structural element referred to in a claim must be included positively. It is true that statements in *ex parte* Stimpson, 1910 C. D., 223 and *ex parte* Dodge, 1906 C. D., 439 would seem to infer the contrary. But, in so far as *ex parte* Stimpson is capable of such interpretation, it is overruled by the well considered decision of *ex parte* Jepson, 243 O. G., 525, while a decision that necessitates the inclusion of the pivotal support of a lever separately from the lever itself needs little discussion.

Where the claims are clear as to what elements are included, there can be no objection to referring to other elements to define their purpose, location, function, etc.; as such elements form no part of the invention, their positive inclusion would be aggregative and improper, (*Ex parte* Compos, 1912 C. D., 255; *ex parte* Curtin, 16 Gour., 39-20; *ex parte* Ames, 13 Gour., 86-21. In *ex parte* Vincke, 1901 C. D., 124, the element required to be included positively was a part of the invention).

But, where the claims are not clear as to what elements are included therein, they do not distinctly point out the invention and, accordingly, should be *rejected,* instead of objected to as has been the practice heretofore.

Duplication of Elements.

If a claim calls for two elements and the combination, as disclosed, embraces but one of such elements, the claim calls for something that has not been invented. Therefore, it does not distinctly point out the invention and should accordingly be rejected. That this is a ground of rejection is recognized by *ex parte* Jennings, 1912 C. D., 153, the reason therefor not appearing, and it was accepted as a ground of appeal in *ex parte* Duncan *et al.,* 1906 C. D., 348; but, on the other hand, was accepted as

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a ground of objection in *ex parte* Forsyth, 16 Gour., 21-17.

While on this topic, it is to be noted that, where an element of a combination has two distinct functions, as when it is an element in each of two intersecting trains for transmitting motion, there are in the combination actual means for performing two distinct functions. In this case the above ground of rejection does not exist, and, so far as can be seen, there is no legitimate ground for objection. (*Ex parte* Duncan *et al.*)

Negative Limitations.

A claim that defines the invention by what it is not, and not by what it is, as a general rule does not point out the invention distinctly. Such a claim should be rejected and not objected to, as is the usual practice, which is supported by *ex parte* Davis, 14 Gour., 22-19.

Surplusage.

A claim which merely contains more words than are necessary, which distinctly points out the invention and adds something more, cannot be said to fail in distinctly defining the invention unless, perchance, such surplusage be so exaggerated as to tend to confusion. Therefore, surplusage without confusion should only be objected to. (*Ex parte* Owen, 1913 C. D., 227.)

Whether statements of purpose, result, operation or advantages are to be allowed in claims is ordinarily a question of surplusage. While sometimes tending to confusion, they chiefly offend against succinctness. If criticised, it should be by way of objection. (*Ex parte* Schweitzer, 1901 C. D., 179.) But it is submitted that such statements which do not confuse the claim should rarely be objected to, and when they cause confusion the claims should be rejected for lack of distinctiveness.

Indefinite, ambiguous, misleading, vague or obscure claims.

Before discussing these types of claims, it is well to understand what we mean by some of these terms:

An indefinite claim is one that is "not precise," i. e., a claim which does not amount to a definition.

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An ambiguous claim is one that has a doubtful meaning, one that is open to various interpretations.

A misleading claim is one that is deceptive, that tends to a wrong interpretation.

A vague claim is one that is indistinct, that is lacking in clear thought.

An obscure claim is one in which the thought is concealed.

This distinction should be kept in mind and defects called by their right names.

Assistant Commissioner Billings in *ex parte* Bitner, 140 O. G., 256, recognizing that there was uniformity in neither the practice nor the decisions treating claims of these types, laid down the rule that where "claims are indefinite, in the sense that they are ambiguous, equivocal, lacking in clearness, or unintelligible" the examiners action shall "be in the form of an objection."

It is thought unnecessary to review the large number of decisions bearing on claims of these types. It is sufficient to say an authority can be found to support any treatment of any claim falling into these groups. The decisions are uniform only in holding that claims must not be indefinite, ambiguous, misleading, vague or obscure.

Commissioner Allen, in *Ex parte* Shepler, 1903 C. D., 17, said:—

> The law requires that the patentee 'distinctly claim' the features which he regards as his invention, and it is the duty of this Office to require that the claims be made definite and certain. The fact that the courts in order to secure to a meritorious inventor the protection to which he is entitled sometimes sustain a vague and indefinite claim by construing it as covering the particular thing invented is no reason for the allowance by this Office of vague claims.

Again, the Commissioner, in *ex parte* Paige, 1887 C. D., 71, said:—

> Whatever terms and phrases are used, the claim must be so framed as to clearly and *distinctly* express the invention and be free from equivocation and ambiguity.

These two quotations are a sufficient recognition of the duty of the Patent Office and the defect inherent in

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any claim of this type. A claim that is not a definition, that is open to various interpretations, that tends to deceive, that has no clear thought, or that effects a concealment of its thought does not distinctly point out the invention. It flies squarely in the teeth of the statute and, therefore, should be rejected, and not objected to as laid down in *ex parte* Bitner.

It is to be borne in mind, however, in treating claims of this type that they are not to be considered apart from their specifications. While claims are often defective in the respects noted when taken by themselves, they become perfectly clear and distinct when read together with their specifications. However desirable it may be to have each claim a sharply defined word picture of the invention standing on its own base, this is too frequently impractical to attempt to enforce any general requirement of this nature. It is well settled that claims that are distinct when read in the light of the specification are sufficient. A more frequent application, then, of *ex parte* Kotler, 1901 C. D., 62, in requiring that the claims be homogeneous with the specification, and a less frequent application of dictionary tests to individual words, would remedy the defects in many claims of these types. It is emphatically urged that the examiners insist on clear, definite, distinct claims and it is believed that their work to this end will be made easier by insisting that every expression in the claims have a clear antecedent in the specification.

Article Claims Involving Process Limitations.

As an article may be made by more than one process, it is natural that inventors should desire a claim to the product rather than to the process because of the greater scope of protection afforded thereby. It is also easier to prove infringement of an article claim than of a process claim. But if an article claim is limited by the process of manufacture, it affords no wider protection than a process claim, since the particular process of production must be proved to establish infringement. There is, then, no hardship in denying to an inventor a claim directed to an article that distinguishes from the prior art only in the process employed.

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If, in order to distinguish from the prior art, it is necessary to define the article by the process of production, the novelty must reside in such process. That is, the invention must reside in such process. If the invention is a process and it is defined as an article, the invention is not distinctly defined. The claim should accordingly be rejected.

As said by the Commissioner in *ex parte* Mayall, 1873 C. D., 134:—

> It is a fallacy to suppose, as this claim seems to imply, that an article is ever patentable merely because produced by a certain mode of proceeding.

The actual defect in such a claim was recognized in *ex parte* Wangemann *et al.*, 15 Gour., 25-36, but this decision, like *ex parte* Bacon, 18 Gour., 6-11, seems to hold the claim objectionable rather than rejectable. Yet the Commissioner, in *ex parte* Warren, 1906 C. D., 87, held that such a defect was properly considered by the Examiners-in-Chief. But, if the defect is statutory and properly considered by the Examiners-in-Chief, the claim should be *rejected.*

Before leaving this subject, it should be emphasized that the rule in question does not prohibit the use of participles in article claims. Where a mode of procedure produces distinctive physical characteristics and, owing to the paucity of language, these characteristics are known only by a participial derivative from the mode of procedure, a claim using such words of definition is entirely distinctive and defines the article by its physical characteristics. Such type of claim is probably referred to in *ex parte* Painter, 1891 C. D., 200, and was approved in *ex parte* Scheckner, 1903 C. D., 315 (etched plate).

Process Claims Involving Apparatus Limitations.

Apparatus limitations have no place in a process claim. (*In re* Fessenden, 226 O. G., 1081; *ex parte* Reynolds, 13 Gour., 7-19.) If necessary to distinguish the process from the prior art, the novelty, and, accordingly, the invention, must reside in the apparatus. If an apparatus invention is defined as a process, it is not distinctly defined and the claims should then be *rejected.*

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Conclusion.

I urge then:—

(1) Uniformity of practice in dealing with claims of the types above discussed.

If a form of expression is proper in one division of the Patent Office, it should not be held improper in another. To take an example, let it not be necessary for an attorney to learn who is to examine an application before he can feel safe in using the expression "one or more."

Again, let not the same form of claim be held *objectionable* in one division and *rejectable* in another. To secure a review in the former case, a petition is proper, in the latter case, an appeal is necessary. Diversity of practice leaves the manner of seeking a remedy a matter of uncertainty. While the Examiners-in-Chief are ready to look beyond the form of an action and examine into its effect, reviewing the decision if it relates to matters of substance, the difficulty may reside in getting the case before them. If the defect is properly objectionable, it must be cured before an appeal is taken. If the defect is improperly objected to, the examiner is none the less likely to insist on its being cured before forwarding an appeal, causing annoyance and delay, and perhaps necessitating a petition before the matter is disposed of or the case sent forward to the tribunal constituted by law to review decisions which go to the merits.

I urge

(2) Rejection of all claims that fail to meet the statutory requirement that the invention be *distinctly* defined.

While the criticism of claims which include superfluous words should be by way of objection (though, if this be the sole defect, they should rarely be criticised), and while claims which seek to cover alternative modifications, whether equivalent or non-equivalent, should be objected to (and other forms of alternative claims not criticised), claims which are misdescriptive, which are not positive definitions of the invention, which are indefinite, ambiguous, misleading, vague, obscure or confusing, or which seek to define the invention in a statutory class to which it does not belong, do not comply with the statutory prerequisite to validity and, as when

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failing to satisfy other statutory prerequisites, should be rejected.

When defects of these types are taken out of the class of informalities and grouped with other questions going to the merits, they will receive more careful attention by both examiners and attorneys. It is but natural and proper to give matters of form only secondary consideration. These defects, however, are not, when analyzed, matters of form but matters of substance. They should never have been treated as informalities, but having been treated from the standpoint of form for many years, they have come to receive but the secondary consideration usually given to matters of form. When classed, however, with the other statutory prerequisites and made a ground of rejection, they will assume their proper importance and the manner of defining an invention will receive the careful attention from both the attorneys and the Patent Office it ought to receive.

Again, as a failure to define an invention distinctly may affect the validity of the patent, any criticism which challenges distinctiveness of definition is entitled to a judicial review by the Examiners-in-Chief and should be disposed of only in the same careful way as are other criticisms which affect the validity of claims. And the very fact that such criticisms will be subject to careful judicial review will tend to more earnest consideration of them by all concerned in the prosecution of claims and, additionally, tend to the adoption of more uniform practice.

The object and aim of my contentions, then, is a more careful attention to the expression of claims. More care in defining inventions will better safeguard the interests of the public, as a *distinct* claim is one which clearly defines the boundaries of the monopoly; will save litigation and conserve the time and efforts of the courts, as a *distinct* claim is one requiring the minimum of construction; will tend to a reduction in the number of claims, as there are much fewer ways of defining a given combination *distinctly* then there are indistinctly; and will make to a stronger patent, as a *distinct* claim stands out in relief against the background of the prior art and forms a fence of certainty around the ground forbidden to the competitor.

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RULE 37.

By RICHARD E. MARINE, Examiner-in-Chief.

Rule 36. * * * * the claims, should be confined to the specific improvement and such parts as necessarily cooperate with it.

Rule 37. The specification must conclude with a specific and distinct claim or claims of the part, improvement, or combination which the applicant regards as his invention or discovery.

Sec. 4888, Revised Statutes. * * * * and he shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery.

When an inventor comes into the field of the useful arts he finds certain territory occupied, he develops additional territory, and leaves for others to develop the unknown territory beyond. It is the office of the patent claim to *specifically* and *distinctly* mark the boundaries of the territory to which the inventor is entitled, to distinguish his rights from the rights of those who came before and of those who come after. It is as unfair to the inventor to locate these boundaries within his territory as it is to others to locate them within their territory or within the unknown territory.

The original patent acts did not compel the filing of distinct claims, but the applicant was required, in his specification, to distinguish his invention from the prior art. Under this practice the onerous duty was imposed upon the courts of ascertaining the exact invention of the patentee by a laborious examination of the art. To relieve the courts of this burden the act of 1836 was enacted under which, for the first time, the applicant was required to "particularly specify and point out the part, improvement or combination which he claims as his own invention or discovery." This statement was amended by act of 1870 to read as above (R. S. 4888).

Rule 37, which is based upon the statute provides: first, that every application contain a claim or claims; second, that the claims be "specific and distinct"; and,

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third, that they be directed to "the part, improvement or combination which the applicant regards as his invention."

The first condition goes to the very life of the patent. In the words of Robinson, the thing patented is the thing claimed (Sec. 505). So true is this that it has been held that an applicant could not cancel all of the claims of his application without filing a formal declaration of abandonment, since to do so would signify his intention to abandon it (*Ex parte* Lasscell, 1884 C. D., 66; 29 O. G., 861). The second condition relates to the manner of pointing out the invention; while the third relates to the substance or thing or things which must be pointed out.

Specific and Distinct.

The words "specific and distinct", as used in the rule, appear to have received no special treatment by the authorities. Their use, however, was evidently inspired by the increasing necessity of having each patent point out in clear, definite and unmistakable terms the exact monopoly sought to be covered. Thus arose the requirement that claims be separate and distinct from the specification, and thus also arose the rules, stated, for the most part in decisions of the commissioners and courts concerning the form of claims, intended to render them clear, definite and unambiguous. A brief consideration of these rules will now claim our attention, but no attempt will be made within the limits of this paper to distinguish between those matters which are considered merely formal and subject to petition and those which go to the merits and are subject to appeal.

Whenever an article of manufacture or composition of matter, or other product, such as motion, heat, light, etc., is produced, some method or way of producing it has been employed and possibly some machine for performing the method. Patentable invention may reside in the *article of manufacture,* in the *composition of matter,* in the *method* or in the *machine,* or in two or more of these, the test for invention being the unobviousness of each, as the case may be, to one skilled in the art.

It is essential to correctly determine the *statutory class* to which the invention belongs and to so word the

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claim as to unequivocably indicate it. (Robinson, Secs. 511, 518.) There is no middle ground such as the use or employment of a thing. (*Ex parte* Mayall, 1873 C. D., 134; 4 O. G., 210.)

An article should not be defined by the process of effecting it. (*Ex parte* Trevette, 1901 C. D., 170; 97 O. G., 1173.) But where it can not be properly defined and differentiated from the prior art otherwise than by reference to the process of producing it, a proper exception to the rule arises. (*Ex parte* Painter, 1891 C. D., 200.) The reason for this obviously lies in the fact that ordinarily it is immaterial to the product, as such, by what process it was produced, but where reference to the process is the only expedient way of defining the final characteristics imparted to the article, then it may be admissible. Where it is apparent what the applicant is attempting to claim, but he claims it in the wrong statutory class the Office may call attention to the error and permit the applicant to so change the phraseology of the claim as to bring it within the proper statutory class. (*Ex parte* Trevette, *supra.*) But it is otherwise where the invention claimable in one statutory class is distinct from that claimable in the other. (*Ex parte* Aberli, 1900 C. D., 95; 91 O. G., 2371.)

No *fixed form* is prescribed for claims. (Corn Planter Patent, 23 Wall., 181; 6 O. G., 392.)

In the contemplation of the law, *each claim is a complete and independent invention.* (Railroad Supply Co. *v.* Hart Steel Co., *et al.*, 222 F., 261.)

Formerly it was held that *a claim* should be *complete in itself* and should not refer to the specification or other claims for limitations thereof, but in *ex parte* Brown (235 O. G., 1355), Assistant Commissioner Clay held that a claim might refer to the combination set up in a preceding claim, with a statement of the structural features distinguishing it therefrom, as in the English practice. The advantages of this form of claim, properly practiced, are that it clearly points out the respect in which the claim is distinguished from the others, thus tending to the elimination of unnecessary claims, and is self-analyzing and self-classifying, facilitating examination and the determination of questions of division.

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The primary requisite of a claim is *definiteness.* The sin of granting a claim that is too broad may be forgiven but that of granting a claim in vague, indefinite, ambiguous or inaccurate form can not be. Members of the public are entitled to know exactly what the patentee meant to cover in his claims and should not unnecessarily be put to the expense of a suit or suits in order to have a claim construed by the courts, perhaps in several different circuits, with the result that the claim may mean one thing in one circuit and something different in the others. Much of the labor imposed upon the Office tribunals, particularly in *inter partes* cases, and upon the courts, results from the vague and ambiguous wording of claims. It is unfortunate that a large part of the Office force is never brought face to face with the evils resulting from the allowance of such claims.

The practice of imposing, by mere interpretation or construction, specific or definite meanings upon generic or indefinite claims can not be too severely criticised. (Briggs *v.* Lillie *v.* Cooke *v.* Jones *v.* Taylor, 1905 C. D., 168; 116 O. G., 871.) In this office a claim which is broadly drawn will be broadly read. (*Ex parte* Cutler, 1906 C. D., 247; 123 O. G., 655.)

The requirement that a claim be definite, however, places no restrictions whatever upon its breadth. A broad claim is not to be objected to as indefinite, but is to be treated in the light of the prior art and applicant's contribution thereto. (*Ex parte* Weaver, 1897 C. D., 165; 81 O. G., 967.) If the invention be a pioneer one, as in the telephone cases (126 U. S., 1; 1888 C. D., 321; 43 O. G., 377), it may cover substantially a whole art. But it is essential that the language of the claim make clear exactly the breadth intended. Nor is the requirement of the rule that the claim be "specific and distinct" intended to place restrictions upon its breadth but only to exact that the part, improvement or combination which the applicant regards as his invention be clearly defined. This is more apparent from the wording of the statute, upon which the rule is based, and a consideration of the reasons which led to its enactment.

Alternative expressions render claims indefinite and are not permissible even though the alternative elements

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are equivalents. A term sufficiently broad to include both elements should be used. Such expressions as "e. g.", "brush or equivalent device", "brick or the like", are alternative and indefinite. (*Ex parte* Grundy, 63 M. S., 219; *ex parte* Cook, 1890 C. D., 81; 51 O. G., 1620; *ex parte* Caldwell & Barr, 1906 C. D., 58; 120 O. G., 2125.) Parenthetical expressions are also not permissible. (*Ex parte* Cahill, 1893 C. D., 78; 63 O. G., 1815.) Where the alternative devices are mere duplicates, however, the objection of alternativeness is more apparent than real and should not be urged. It has been held that the expression "one or more" may be either proper or improper, depending upon whether it is employed to designate duplicates or otherwise. (*Ex parte* Hulbert, 1893 C. D., 75; 63 O. G., 1687; *ex parte* Thorsen, 1893 C. D., 75; 63 O. G., 1688.)

It is essential to definiteness that all elements referred to in the claim as parts of the combination should be *directly and positively included* (*Ex parte* Holt, 1884 C. D., 43; 29 O. G., 807; *ex parte* Vincke, 1901 C. D., 124; 96 O. G., 2061), and that the antecedents of terms be clearly indicated. (*Ex parte* Kuhlwind, 13 Gour., 37-17, 18 and 19, May, 1901.)

The *same element* should not be *twice included* in a claim. (*Ex parte* Horton & Keen, 1912 C. D., 276; 183 O. G., 217.) But in *ex parte* Duncan, Prichard & McCauly (1906 C. D., 348; 124 O. G., 1207) it was held that where an "actuating connection" includes as one of its parts a cross pin which serves also as a latch, no valid reason exists why the "actuating mechanism" and the "latch" should not be independently recited in the claim.

The term *"means" followed by a statement of function* is broad and is applicable either to a *single* element or to a *plurality* of elements. (Lacroix *v.* Tyberg, 33 App. D. C., 586; 1910 C. D., 263; 150 O. G., 267.)

Under the recent decision in *ex parte* Jepson, 243 O. G., 525, it is held that the *introductory phrase* may be an actual limitation of the claim if the real invention can not exist apart from it, and that where an applicant presents a claim which particularly points out his exact invention, there is nothing in the law to interdict his doing it by including the old parts of the structure in a

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preamble set apart from the structure which constitutes the real invention.

Intangible features, such as openings and holes, should not be claimed as independent elements but should be included as features of construction of the elements in which they are located. (*Ex parte* Davin, 1902, C. D., 251; 100 O. G., 452.)

The *hand of the operator* is not properly claimable as an element of the combination. (*In re* Lacroix, 30 App. D. C., 299; 1908 C. D., 345; 133 O. G., 2181.)

Where the invention is such that it can only be described with clearness by referring to parts of the device with which it is associated, the latter *may be indirectly referred to in the claim.* (*Ex parte* Compos, 1912 C. D., 255; 182 O. G., 719.) Also, things or materials acted upon by a machine, or other device, should not ordinarily be positively included. (*Ex parte* Ames, 13 Gour., 86-21, November, 1901.) Nor is it necessary to include in claims parts which are well known features of the apparatus to which the claims relate. (Automatic Switch Co., *et al., v.* J. L. Schureman Co., 183 F. R., 776.)

Negative limitations are often not permissible because they are indefinite. An invention should be defined by what it is rather than by what it is not. (Draper Co. *v.* Stofford Co., 196 F. R., 501.) The writer is of the opinion, however, that this rule should not be invoked where the so-called negative limitation is definite, for instance, in the expression "a core having a winding on a part thereof, a part being unwound," reference to the unwound part emphasizes a construction which gives rise to a large leakage flux from that part, and the language indicated would appear to define the construction with clearness and definiteness.

A claim should set forth the *relative locations, purposes or functions of its elements* whereby an operative device is effected. (*Ex parte* Hamilton, 1898 C. D., 273; 85 O. G., 1742.) In order to render a claim to a combination valid it is not sufficient that it be based upon the disclosure of a device whose parts coöperate, but it is necessary that this relationship be set forth in the claim itself. (Thatcher Mfg. Co., *et al., v.* Burtis, *et al.,* 121 U. S., 286; 1887 C. D., 320; 39 O. G., 587.) A claim

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which is a mere catalogue of parts is objectionable. It is as it were a storehouse into which one might go and from the elements that one finds there construct any one of a number of independent inventions. Such a claim does not "particularly point out and distinctly claim" the invention of the applicant so as to distinguish it from other inventions that might involve different arrangements or functions of the same elements. Claims of this character frequently give rise to the declaration of interferences where no interference in fact exists. (Poddlesak & Poddlesak *v.* McInnerney, 26 App. D. C., 399; 1906 C. D., 558; 120 O. G., 2127; *ex parte* Cutler, *supra.*) The many evils to which they give rise come to the attention of the Office to some extent in interference proceedings, but it is more difficult for the Office to appreciate the hardships they inflict upon the public and the burdens they impose upon the courts.

A claim should further set forth all the essential elements necessary to make a *complete device* operative for the purpose intended (Rule 133), or to effect any function alleged therein. A common failure to comply with this requirement is illustrated in the use of the "whereby" clause in a claim which does not include sufficient structure to accomplish the result stated. (*Ex parte* Kotler, 1901 C. D., 62; 95 O. G., 2684.) The latter case should be distinguished from that wherein the term "means," or similar comprehensive structural limitation, is limited by a function clause beginning "whereby."

Part, Improvement, or Combination.

Little attention is given by the authorities to an individual treatment of the term "*part*," possibly for the reason that this term is self-explanatory, but Robinson (Sec. 210) defines an "*improvement*" as:

> an addition or alteration in some existing means, which increases its efficiency without destroying its identity,

and he defines a "*combination*" as:

> a union of elemental means in a mode of cooperation, and, as such, it necessarily performs functions into which all its elements enter as operative elements and produces results which depend upon the presence and action of every one of the elements combined. (Sec. 156, Note 2.)

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Closely associated with these terms in the analysis of claims is that of "*aggregation*" which is defined by the Supreme Court in Hailes *v.* Van Wormer* (20 Wall., 353; 5 O. G., 89) as:

> the grouping together devices, in which each produces its customary effect, unmodified by the others, and no more, and no result follows from the union which was not previously produced by some of the elements,

and the term "*equivalent*" which is defined by Robinson (Sec. 247) as:

> an act or substance which is known in the arts as a proper substitute for some other act or substance employed already as an element in an invention, and whose substitution for that other act or substance does not in any manner vary the idea of means.

R. S. 4888 requires that the *applicant* point out the part, improvement, or combination which *he claims* as his invention and Rule 37, in different language but evidently with the same meaning, requires that the *applicant* point out the part, improvement, or combination which *he regards* as his invention. In other words, this section of the statutes and the rule place the primary responsibility of locating the boundaries of his invention upon the applicant himself, where it properly belongs. The Office, however, is not relieved of the duty of requiring that the claim be limited to the real invention present, irrespective of the applicant's opinion, for Section 4893 of the Revised Statutes provides that the Office shall make an examination of the *alleged invention* and if it appear "that the claimant is justly entitled to a patent under the law," it shall be granted. Now, under the law, it is for *invention only* that the grant of a patent monopoly is authorized (Const. Art. 1, Sec. 8; R. S. 4886; Rule 24), and the last clause of Rule 36 requires that the claim "be confined to the specific improvement and such parts as necessarily coöperate with it."

Bearing upon this question, the Supreme Court in Keystone Bridge Co. *v.* Phoenix Iron Co. (95 U. S., 274;

*(For other decisions on aggregation see Reckendorfer v. Faber, 92 U. S., 347; 1876 C. D., 430; 10 O. G., 71. Pickering v. McCullough, 104 U. S., 310; 1882 C. D., 28; 21 O. G., 73.)

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1877 C. D., 384; 12 O. G., 980), after noting that the statutory requirement for the filing of claims was for the purpose of relieving the courts of the task of ascertaining the invention, states that it is the duty of the Office to examine, scrutinize and limit the claim and make it conform to what the applicant is entitled to, and Robinson (Sec. 538) adds: "The claim is to define what the Patent Office, after due examination, has ascertained to be the real discovery of the inventor." With reference to an improvement, he says: "A claim for an improvement must * * * not only define the improvement, like any other new invention, but also fully and accurately distinguish between it and the old invention * * a claim (for an improvement) should confine itself entirely to the characteristics of the improvement made. * * * A claim to the whole invention, when the advance is in the improvement, is invalid." (Robinson, Sec. 534, and decisions therein cited.)

Since, therefore, it is the office of the claim to declare the real invention, the claim should be limited only to such features as were essentially involved in the inventive act. If the invention resides only in a part, the part only should be claimed, if only in the improvement, the improvement only should be claimed, and if in the combination, the combination should be claimed. Inventions may, of course, simultaneously reside in a part, an improvement and the combination.

While, in the stating, these principles are comparatively simple, their practical application is not. They are continually the source of much vexation to the Office and the applicant alike. A simple example will assist in fixing ideas.

Let us assume that structures made of parts secured together by fastening means are unknown and that one conceives the idea of a box having bottom, ends and sides made of flat wooden pieces, and some means, such as nails, for securing the parts together. He would be entitled to a claim commensurate in scope with his conception, as follows:

> 1. A container comprising side members, end members, and bottom members and means holding the same together.

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Since the nails coact in a special manner with each pair of adjacent parts to form rigid joints, and the arrangement was not obvious before the inventor suggested it, he would also be entitled to the following claim:

> 2. A structure comprising separate portions placed edge to edge and securing means passing through one portion and embedded in the other.

Likewise, if the nail was provided with a head, he would be entitled to a similar claim which specifies that "the free end of the securing means" was enlarged to engage the surface of one of the portions, to prevent it being drawn through the material.

Now in all of these cases we have attempted to express the elements of the combinations, and the combinations themselves, in as broad terms as was possible and at the same time bring out the essential idea of *cooperative relationship* existing between the parts of the combination. The reason for this is that the broad concept of *cooperative relationship* was the real invention so far as the combinations were concerned and specific detail was immaterial thereto. For instance, the idea of *cooperative relationship* in claims 1 and 2 was not concerned with the specific characteristics of the nail employed. Further, the idea of *cooperative relationship* between the nail as a fastening means passing through one portion and embedded in another, as set out in claim 2, was not concerned with the entire box construction but only with two of its portions and the nail. Claim 2 was therefore limited to the latter subcombination. (*Ex parte* Baker, 1912 C. D., 291; 183 O. G., 505.)

Continuing our illustration, let us assume that later another (or even the same inventor) devises the cut nail or wire nail for use where the hand-forged nail was used before. Clearly it would not require the exercise of the inventive faculties to substitute the former for the latter in the box construction, since no new principle of coöperative relationship in box combinations is involved thereby. This would be the mere *substitution of a new mechnical equivalent* in an old combination. The new invention, therefore, resides in the new form of nail, *per se,* rather than in the combination, and should be so

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claimed. It would appear, however, that the box as fastened together with cut or wire nails constitutes a combination satisfying the definition of "combination." But it is not patentable over the prior box combination because its production did not involve the exercise of the inventive faculties. It is an unpatentable combination and, under section 4888 of the Revised Statutes, a claim drawn thereto should be rejected on the ground that it does not "particularly point out the part or improvement" which constitutes the real invention, the latter residing in the element and not in the combination as a whole.

From these observations the principle is clear that *the substitution for an element or group of elements in an old combination of another element or group of elements, old or new, for performing the same function, does not render the combination patentable where it did not require invention to conceive the change or there is no new result produced thereby.* This principle finds most ready application in cases where the substituted part or subcombination is a distinct article of manufacture of general utility. (*In re* McNeil, 20 App. D. C., 294; 1902 C. D., 563; 100 O. G., 2178; Langan *v.* Warren Axe & Tool Co., 184 F. R., 720; 1911 C. D., 490; 166 O. G., 986; Underwood *v.* Gerber, 149 U. S., 224; 1893 C. D., 340; 63 O. G., 1063.) An applicant will not be permitted to include in his claims the real invention and in addition thereto elements which do not coöperate therewith to produce a new result. (*Ex parte* Griffith, 1898 C. D., 233; 85 O. G., 936; *ex parte* Whitelaw, 1915 C. D., 18; 219 O. G., 1237.) And this is true whether or not he has other claims covering only the real invention. (*Ex parte* Lahue, 1902 C. D., 357; 101 O. G., 448.) A claim should not be allowed merely because of a prolixity of elements. (*Ex parte* Iagan, 1911 C. D., 10; 162 O. G., 538.)

Recurring to our illustration, it must not be inferred that a specific form of fastening means could never be specifically claimable in a box structure, for, assume that one conceives the idea of using bolts instead of nails, the end of the box being set within its sides and bottom, and a bolt being passed diagonally through each corner

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so that its head engages one side of the box and the nut engages the bottom, clamping the parts of the box between them. This would produce an effective corner fastening, and since there is a *new and previously unobvious cooperative relationship* of parts, the combination specifically defined would be patentable over the prior constructions. Thus, *where a new element coacts with the other elements of the combination in a different manner from the corresponding elements of the old combination, the decisions referred to* (McNeil, etc., *supra*) *do not apply.* (*Ex parte* Mumford, 1914 O. G., 84; 206 O. G., 878; *ex parte* Baker, *supra.*)

Pursuing our box illustration further, assume that castors are invented for attachment to the bottom of the box to permit it to be readily moved, and a lock for its lid is also invented to prevent others from tampering with its contents. A claim is asserted for a box structure provided on its bottom with castors and having a lock for the lid. Clearly here we have no coöperative relationship between the castors and the lock. But, rather, they constitute a mere assemblage of elements which do not coöperate to produce any unitary result. Such an assemblage is an *aggregation.*

The decisions have been by no means uniform or consistent in their use of the term "aggregation," it being frequently employed to designate what has been analyzed above as an unpatentable combination, but the distinction sought to be drawn between the two in this paper is believed to be fundamental. (*Ex parte* Baker, *supra*; Krell Auto Grand Piano Co. *v.* Story & Clark *et al.*, 207 F. R., 946; 1914 C. D., 246, see particularly page 251, II.)

The principles governing the construction of claims, to which we have been directing our attention, are generally applicable to *the several statutory classes of invention.* A frequent occasion for their application to method claims arises from the inclusion of structural limitations therein. Often—though it is believed, not always—it is immaterial so far as the steps of a method are concerned by what means they are performed and in such case the inclusion of such means is improper. Also, it is immaterial to a method that one or more of its steps are performed "automatically" since the method

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is the same whether the steps are performed automatically or by hand. Where the invention involves a method of operating mechanism the latter must, of course, be referred to in the claim.

The practice outlined above, properly applied, is a most salutary one since it provides the maximum of protection with a minimum number of claims, if no error is made in its application. It also greatly facilitates classification and search. There are few evils in our patent system greater that the unnecessary *multiplication of claims* brought about by the inclusion of unessential limitations and obscure distinctions which lead to ambiguity and deception of the public. Such claims fail to comply with the statute which requires that the invention be pointed out particularly and distinctly. The inventor himself suffers by reason of this practice which has been repeatedly condemned by the Office and the courts, because the doctrine of equivalents is less liberally applied and the terms of the claims more strictly construed in such cases. (*Ex parte* Chapman, 1906 C. D., 79; 120 O. G., 2446; and decisions therein cited.)

Frequently an applicant inadvertently restricts his monopoly by unnecessarily limiting his claims and is glad to have his attention called to the fact. He may even lose his entire monopoly by claiming his real invention in combination with other elements, as in the case of Langan *v.* Warren Axe & Tool Co. and Underwood *v.* Gerber, *supra.* On the other hand, the element or subcombination may be a matter of secondary consideration (or even be eventually determined to be old) and the value of the invention may lie in the combination, which, if unobvious, is clearly patentable, whether the parts be new or old. In analyzing claims, great care should therefore be exercised not to apply the doctrine of equivalents superficially. Rejections on the broad ground of aggregation, unpatentable combination, functionality and the like, should give place to a particular analysis of the claim and a statement of specific reasons why it is believed that the claim fails to point out an inventive act. Often the full equivalence of an old to a new element in a combination is more apparent than real and to deprive the inventor of the combination may be

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to deprive him of an invention of intrinsic merit. To illustrate, in the light of our present knowledge, a screw would ordinarily be held the substantial equivalent of a nail. But it is not an exact equivalent because it possesses the distinct advantage that two parts secured together thereby are positively clamped between its head and threads, the latter acting as wedges to force the parts together as the screw is driven home, which action is absent in the case of the nail. Now suppose that the inventor who first suggested this combination had been rejected on the ground that his invention resided in the screw *per se* and had accordingly limited his claims to the latter and taken his patent. Subsequently it developed that the screw had been previously employed as a peg on which to hang articles, it having the advantage that it would not pull out, but that its utility as a clamping device to secure parts together had occurred to no one before the patentee suggested it. Since the mere use of a device is not patentable, in no case could claims of the patent limited to the screw *per se* be held valid even though it may be admitted that the use of the screw *in the combination* involved invention over its use as a peg. In view of the difficulty of foreseeing what light may be thrown on an invention by subsequently developed art, in case of doubt it is better to allow both combination claims and claims to the subcombination, for if an error is made in allowing claims of doubtful patentability it can be corrected by the courts, whereas if a claim be improperly rejected irremediable injury may result to the applicant.

An analogy is found in the case of the U. S. Repair & Guaranty Co. *v.* The Assyrian Asphalt Co. (U. S. Supreme Court, 1902 C. D., 575; 98 O. G., 582), involving a method of repairing asphalt pavements by applying heat at the edges of the excavation. Here the applicant canceled a claim to the use of a "blast of heat," as one of the steps, in response to a criticism of the Office, retaining a claim to the use of "heat." Suit was brought on the patent which eventuated, and the use of heat broadly was shown to be old. It was thereupon urged by the patentee that the "blast of heat" was the important thing but it was held that he could not rely upon this

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allegation to sustain his claims which were not so limited. The possibility of such contingencies is contemplated in *ex parte* Pease (1914 C. D., 48; 202 O. G., 631), wherein it is stated:

> The limitation "combustible fabric" excludes many materials * * * which are inappropriate for applicant's purposes, and by excluding such fabrics applicant has more accurately defined his invention than by including them.

It is further stated in the last mentioned decision that "it has always been the policy of the Office to allow some latitude to applicants in drawing their claims, since applicants and not the Office will be eventually held responsible for what is expressed therein." Where the privilege is not abused, the Office is more liberal in construing differences between claims in one application than between claims in different applications, although strictly the tests of patentability are the same. (*Ex parte* Griffith, *supra.*) The reason for greater liberality in the former case is that if the claims are in fact not patentably different, nevertheless no extension of the monopoly can result if both are allowed in the one application, whereas it may be otherwise if they are allowed in different applications.

The proper analysis of claims in the effort to locate the invention calls for the exercise of the keenest discernment and mature judgment on the part of the examiner in order that full justice may be meted out to the applicant and the public alike.

Functional Limitations:

Few questions arise, in the consideration of claims, about which there is a greater divergence of views and practice than those concerning the propriety of combination claims having one or more of their elements defined as *means limited by a function.* The criticism is frequently made that such claims are "functional and indefinite," and they have sometimes been objected to and sometimes rejected on this ground. Only a general outline of the cases bearing on the question can be given here and for a more complete understanding of the man-

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ner in which the subject is treated by them recourse should be had to the decisions themselves.

In Morley Sewing Machine Co. *v.* Lancaster (129 U. S., 263; 1889 C. D., 380; 47 O. G., 267) the Supreme Court held that where the patent involved a pioneer invention, a claim consisting of a series of means functionally limited was valid. (See also Paper Bag Patent Case, 210 U. S., 405; 1908 C. D., 594; 136 O. G., 1297.)

It has generally been held that where the idea is clearly expressed the *breadth* of the statement in such claims is no reason for objecting to it. (*Ex parte* Halfpenny, 1895 C. D., 91; 73 O. G., 1135; *ex parte* Knudsen, 1895 C. D., 29; 72 O. G., 589; *ex parte* Bitner, 1909 C. D., 132; 140 O. G., 256.)

In *in re* Gardner (1909 C. D., 306; 140 O. G., 258; 32 App. D. C., 249) claims of the following type were before the court:

> In combination in a vapor-register, a dial upon which are marked pressures and heat characteristics and a device for automatically indicating on said dial simultaneous pressures and heat characteristics.

The court held that such a claim, while in the form of a combination, in effect covered all means for accomplishing the function or result stated, and was therefore unpatentable.

It has frequently been held in leading decisions that the word "means" or "mechanism" may be properly used to designate the so-called "adjunctive" or "secondary" or "old" elements, but that to use them to designate that portion of the claim in which the invention resides renders the claim functional and subject to rejection. (*Ex parte* Paige, 1887 C. D., 71; 40 O. G., 807; *ex parte* Pacholder, 1890 C. D., 55; 51 O. G., 295; Westinghouse *v.* Boyden, 170 U. S., 537; 1898 C. D., 443; 83 O. G., 1067; Davis Sewing Machine Co. *v.* New Departure Mfg. Co., 217 F. R., 775; 1915 C. D., 180; 212 O. G., 1057.) It appears to the writer, however, that the problem is not one of novelty or of invention residing in the functionally limited element, or of the importance of the element in the combination, and that to consider it as such departs from the fundamental principles underly-

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ing the theory of our claim structure. We have already seen in our box illustration (claims 1 and 2) that the purpose of a functionally limited element in a combination claim is merely to cover the range of all equivalent elements which can be used to produce the same effect in the combination, thereby avoiding unessential limitations. For instance, in claim 2 of our illustration, if instead of the functionally limited element, "means passing through one portion and embedded in the other," one of the equivalents, say the nail, were specifically included, the combination, in so far as its ability to accomplish its ultimate result is concerned, would be unaffected. The claim would have the defect, however, that it was unduly limited since it would fail to cover other equivalents of the nail in the combination. The rule governing the propriety of functionally limited elements in combination claims, it would appear, therefore, should not be different from that governing the propriety of structurally limited elements. In each case the combination would appear to be patentable to the extent that there exists a *new and unobvious cooperative relationship* between the several elements as defined. Moreover, it is well settled that a combination claim does *not assert novelty or invention in any of its elements,* but *only in the cooperative relationship set up between them.* (Ritter *v.* S. S. White Dental Mfg. Co., 228 F. R., 301; 1915 C. D., 297; 220 O. G., 349; Underwood *v.* Gerber, *supra.*) Whether, then, an element or subcombination structurally or functionally limited is new or old, we may, for the purpose of the combination, treat it as old. To make functionally limited elements an exception to this rule would be to penalize an inventor because in inventing the combination he found it necessary first to invent the subcombination or element, for had he found the latter old in the art the objection of functionality would not have been raised against him, although the invention expressed in the combination would remain unchanged.

It would accordingly appear that the real question to be determined in the consideration of claims involving means or mechanism as elements, is not one of functionality but of the coöperative relationship of parts and

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the obviousness of the combination, assuming for the purpose of determination that all the elements are old. Should it be held that there was a new coöperative relationship of parts and that the idea of combination expressed in the claim was an unobvious one prior to its suggestion by applicant, then the claim would be a patentable combination; if, on the other hand, a new coöperative relationship were lacking or the idea of combination expressed in the claim was obvious, the claim would cover an unpatentable combination and should be rejected. This test, applied to the Gardner claim, *supra*, would result in the finding that since it was old to combine indicating dials with actuating elements of every description, there was no invention in the idea of combining an appropriate dial with an actuating device for automatically indicating thereon simultaneous pressures and heat characteristics, and the claim is therefore unpatentable.

A claim which covers *all devices or methods for accomplishing a result* or which attempts to *monopolize a principle of nature,* rather than set up a combination of means or steps of a method whereby the result may be accomplished or whereby the principle of nature may be utilized, is invalid since it is broader than the invention. It states the problem but not its solution. (O'Reilly *v.* Morse, 15 Howard, 62; Hildreth *v.* Lower, *et al.*, 204 F. R., 792; *ex parte* Bullock, 127 O. G., 1580; 1907 C. D., 93; 127 O. G., 1580.) Also a claim to a combination of elements may be broader than the disclosure of invention (Incandescent Lamp Patent, 159 U. S., 465; 1895 C. D., 675; 73 O. G., 1289; *in re* Dosselman, *et al.*, 37 App. D. C., 211; 1911 C. D., 379; 167 O. G., 983), but the latter principle should be applied with discretion. (*In re* Ellis, 37 App. D. C., 203; 1911 C. D., 374; 167 O. G., 981.) The theory of combination claims, as already set forth, is that an inventor is entitled to all fair equivalents of the elements or subcombinations of the combination disclosed by him, and it is for this reason that generic claims are permissible. Without them patents would be valueless, for infringement of a meritorious invention could be readily avoided by a substitution of equivalents. An inventor is therefore entitled to a claim as broad as his

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idea of combination and in the case of pioneer inventions is, of course, entitled to a wide range of equivalents. (Telephone Cases, *supra.*)

An illustration of these principles is found in the use of the word "automatic" as applied to an element of a machine. A claim containing such a limitation broadly has been held by the Board of Examiners-in-Chief to be unpatentable because it covers all automatic machines capable of performing the same function and does not point out any novel feature of invention (Huber patent No. 857,283). Where, however, the element was stated by the claim to be automatic in response to or irrespective of certain specific conditions recited as a functional limitation, it was held by the First Assistant Commissioner (now Commissioner) Newton that rejection on this ground was not applicable (Caseo patent No. 1,160,-857). The patentability in the latter case would, of course, depend upon the unobviousness of the relationship set up by the functional limitation.

Summary:—

We may summarize the conclusions deduced from our consideration of claims, as follows:

(1) The mere substitution of an element or subcombination, whether it be new or old, for its equivalent, in an old combination is not patentable.

(2) If the elements or subcombinations bear a new and unobvious coöperative relationship to each other, or if the substitution of the new element produces a new and unobvious result in addition to the old result, the combination is patentable.

(3) Where the invention resides solely in the subcombination it should not be claimed in combination.

(4) Combination claims including as elements means or mechanism limited by function may be patentable or unpatentable, dependent upon the effect of such elements, as defined, in the combination, in accordance with the principles stated under (2).

(5) Claims to a principle of nature or to a result or to all means for producing a result are unpatentable.

While I have not viewed Rule 37 as applying to questions arising in connection with the rejection of claims

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on prior art, the general rule for the rejection of combination claims on a combination of references is so closely related to the questions which we have been considering that I will quote the following statement of principles governing the same, from *ex parte* McCollum (1914 C. D., 70; 204 O. G., 1346):

> When legitimate combination claims, such as those appealed, are rejected on two or more references, the trend of the best authorities indicates that at least one of the references ordinarily should show the general combination claimed.
>
> * * * * * * * * *
>
> Legitimate combination claims are for constructions or mechanisms for performing a function, and it is improper to reject them on ideas extracted from various references unless those ideas are accompanied by constructions that may be put together without so changing them as to require invention to adapt them to perform the desired result.
>
> In determining the patentability of a claim over features found only in a plurality of references it is necessary to consider the structural differences specified in the claims, as well as their functional difference or result. If the structures of the several references can not be combined without the exercise of invention, even though the result is old, the claim should be allowed. If the structures of the references may be combined or substituted one for the other and the combined function or result is new, the claim should be allowed. It is only when both the structural features found in the references may be combined without invention to meet the structure called for by the claim and the function or result involves no invention that the claim should be rejected.

In our treatment of claims over and above all else is the principle that if one has done an *unobvious* thing—has made an invention—he is entitled to a patent therefor, and no strict application of rules should be allowed to deprive him of his rights. (Miehle Printing Press & Mfg. Co. *v.* Whitlock Printing Press Co., 223 F. R., 647; 1915 C. D., 284; 218 O. G., 1155; American Ball Bearing Co. *v.* Finch, 239 F. R., 885.)

Invention is a mental act, not a physical one. Usually the invention is in the idea of adaptation rather than in the physical changes necessary to carry it out, the latter being obvious after the suggestion is made. (Hobbs *v.* Beach, 180 U. S., 383; 1901 C. D., 311; 94 O. G., 2357;

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Potts *v.* Creager, 15 Sup. Ct., 194; 155 U. S., 597; 70 O. G., 494; Topliff *v.* Topliff, 145 U. S., 156; 1892 C. D., 402; 59 O. G., 1257.) The test of invention should not be, could one skilled in the art, after seeing the invention, assemble the parts of specially selected references in the manner taught by the invention undergoing test, but, rather, would he, without knowledge of the invention, be led to make the selection of the particular references from the entire art and modify and combine them in the manner taught by the applicant, without the exercise of his inventive faculties. (Ideal Stopper Co., *et al.*, *v.* Crown Cork & Seal Co., 131 F., 244; Faries *v.* Brown, 57 C. C. A., 609.) In the words of the court in the latter case: "The eye that sees a thing already embodied in mechanical form gives little credit to the eye that first saw it in the imagination. But the difference is just that between what is common observation and what constitutes an act of creation. The one is the eye of inventive genius; the other of a looker on after the fact."

ANNUAL MEETING OF THE PATENT OFFICE SOCIETY.

The annual meeting of the Society was called to order by President Coulston at 4:30 P. M. in the south hall, third floor of the Patent Office building, January 23, 1919, a good representation of the Society's membership being present.

The President briefly reviewed the work done during the past year, mentioning specifically the purchase of a moving-picture machine and the use thereof in the public meetings held and lectures given; the series of papers read by primary examiners and other officials before and for the benefit of the new assistant examiners; the establishment of the JOURNAL OF THE PATENT OFFICE SOCIETY; the maintenance of relations with the Patent Committee of the National Research Council and the attendance of members of the Society upon conventions in Atlantic City, Baltimore and Richmond. All these activities were commended and renewed efforts along similar lines urged for the coming year.

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The President announced receipt of copies of the report of the Patent Committee of the National Research Council, and it was voted to refer the report to the Executive Committee of the Patent Office Society for early consideration.

The report of the Treasurer of the Society showed a balance on hand of $701.72.

On motion of the chairman of the Membership Committee, Hon. Thomas Ewing was unanimously elected the first honorary member of the Society, and upon further motion by the same chairman, the following gentlemen, comprising the other members of the Patent Committee of the National Research Council, were also unanimously elected honorary members: Dr. Wm. F. Durand, Dr. L. H. Baekeland, Dr. M. I. Pupin, Lt. Col. R. A. Milliken, Dr. S. W. Stratton, Dr. Reid Hunt, Mr. F. P. Fish, and Mr. E. J. Prindle.

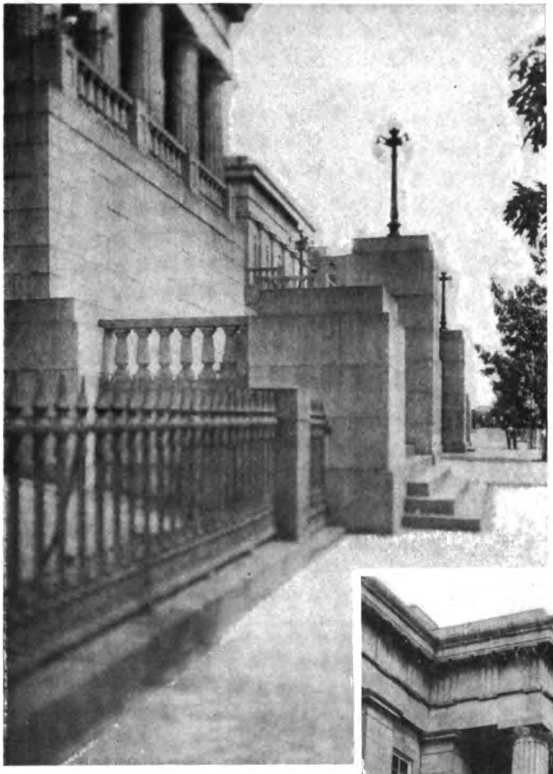
The annual election of officers of the Society and members of the executive committee was held during the session with the following result:

President, M. H. Coulston; Vice President, J. H. Lightfoot; Secretary, Bert Russell; Treasurer, W. F. Avery.

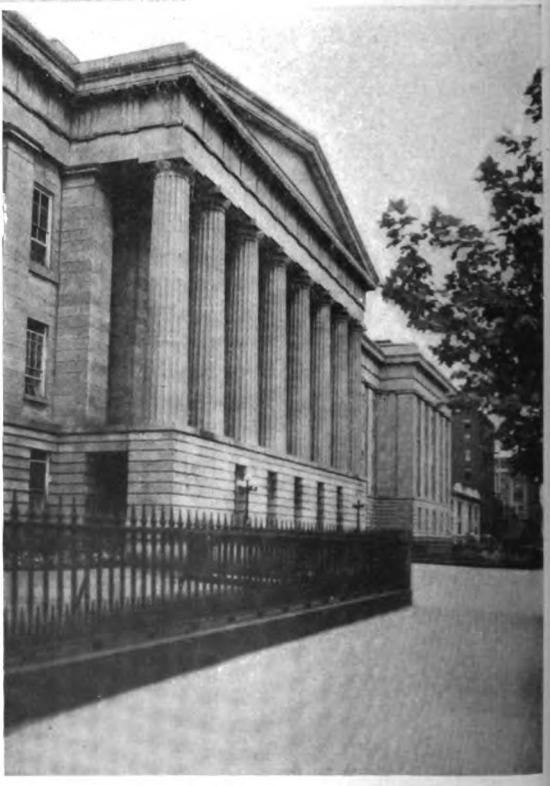
Members of the Executive Committee: A. W. Cowles; E. S. Glascock; G. A. Lovett; C. H. Pierce; M. E. Porter; E. D. Sewall; W. L. Thurber; W. J. Wesseler.

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STAIRWAY OF THE MAIN ENTRANCE



G STREET PORTICO.

DETAIL VIEWS OF THE PATENT OFFICE

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Journal

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VOL. I. MARCH, 1919. No. 7.

EDITORIAL.

From various sources of late, charges have been made that the Patent Office has been granting patents for chemical inventions where the disclosure was insufficient to enable any one skilled in the art to carry out the process described therein and that such a situation exists particularly with respect to certain foreign-owned patents.

A careful inquiry on the part of some of the officials of the Office has failed to reveal any substantial ground for the complaint. Being interested in the welfare of the patent system, this JOURNAL would welcome more

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specific information on this point in order that if the alleged evil amounts to or indicates an intentional practice, initiated by certain inventors and carried on with the connivance of certain attorneys, a proper investigation may be made. It is with the hope and in the spirit of the fullest coöperation that the invitation is extended to furnish more specific information on this point.

It is a law of Nature that matter and energy tend to persist without change unless acted upon by a modifying energy; and that law extends to sentient beings. Habit and custom are within it. Eternally, however, modifying forces are at work tending to change conditions. Habits and customs beneficent at one period, may, owing to changed environment or association, become malefic,—still they tend to persist. There are no sterner adversaries of progress. Anachronistic laws and customs must yield, however, in good time to the thought of the thinker backed by the will of the worker, or, belated, fall under the revolutionary acts of the multitude. Many, heedless of the history of the growth of science, flout the reformer as academic or theoristic. Nevertheless, the theorist will continue his blessed theorizing and his disciples will furnish the energy to attain in time the goal of progress.

There are customs and statutes affecting the patent system deemed by students of patent law to be archaic and imperfect. Suggestions of improvement have not been lacking, but their appeal has lacked the force to dislodge intrenched custom. The JOURNAL reproduces herewith some notions of past days, because they are relevant to recent recommendations contained in a report of the Patent Committee of the National Research Council and to suggestions in articles by examiners of this Office, published in this number. Thoughtful consideration of the subjects discussed is invited. If the coöperative thought of those qualified to form a judgment on the matters presented leads to the conclusion that the suggestions or recommendations would, if put in practice, improve the administration or enforcement of the patent law, that same coöperative thought can doubtless supply the energy to overcome the inertia of the *status quo*.

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The suggestions and recommendations referred to relate to the course of appeals in patent cases, the status of the Patent Office in the executive organization, and the internal organization of the Patent Office.

Since the passage of the act of 1836 the organization of courts having jurisdiction of rights under patents for inventions has not been improved in the interest of litigants and the general public. Conditions now are widely different from what they were a quarter century ago. Patents are vastly more numerous, manufactures enormously increased, and industrial organization is widely changed. Under the law of 1836, the several circuit courts had cognizance of suits involving rights under patents and an appeal lay directly to the Supreme Court. Under this act, therefore, rights under a patent could be settled with certainty and reasonable speed. The act of 1891, creating the circuit courts of appeal, gave original jurisdiction over suits involving a patent right to the several district courts and final appellate jurisdiction to the circuit court of appeals appropriate to the district in which the suit was brought. This act relieved the courts and facilitated ordinary litigation, but not patent litigation. Now a patent right may be brought in question in several jurisdictions and adjudicated differently; wherefore the right may be uncertain unless and until the Supreme Court shall see fit to review the decisions below, and the uncertainty may extend over a major part of the life of the grant.

The Patent Office was created as a bureau in 1836 and attached to the State Department. It still continues as a departmental bureau (although attached to another department) and retains substantially the original organization and nominal relationships, notwithstanding the vastly changed conditions and the wide differences between its activities and the activities of the other bureaus associated with it in the same department. It has long been questioned whether this association is not distinctly detrimental to the efficiency and usefulness of the Patent Office.

In 1836 the Patent Office was organized with a personnel consisting of a Commissioner, a chief clerk, an examiner, three clerks and one messenger. Throughout the progress of the intervening years this organization,

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though enormously expanded, remains unchanged. Many more examiners, clerks and messengers have been added; an appellate tribunal has been interposed between examiner and Commissioner, and the Commissioner has been given the help of two assistant commissioners but with the same extent of jurisdiction as himself. As the number of examiners has increased the firmness of the Commissioner's grasp upon his duty to determine the patentability of every alleged invention presented to the Patent Office has necessarily relaxed. The parallel jurisdiction of the assistant commissioners has further divided responsibility on questions of patentability and practice. Although the Commissioner of Patents originally commanded, as it were, a mere squad, he now commands an army, but has neither the emoluments of an army commander, nor a commander's aids to the efficient execution of his orders. A police force, (to draw a crude parallel) starting with such small beginnings, would have grown differently. As the constabulary force increased, between constable and chief, there would have been interposed roundsmen or sergeants, lieutenants, captains, inspectors and so on, of local jurisdiction, through whom the reins of the organization would converge into the hands of the chief. Some have thought an improved organization of the Patent Office personnel, more in accord with the principles of organization commonly found effective in large bodies of individuals engaged in work of the same character, is essential to greater efficiency.

It has been suggested that a commission having the dignity of a federal court, whose judgments would command equal respect, ought to head the Patent Office. This suggestion is peculiarly in accord with the notion of the Patent Office as an independent office or commission. Can the launching of a patent be of less importance than the subsequent test of its force and validity? Are the duties and responsibilities of the officers empowered to make the grant less valuable or important to the public than those of the federal judge who subsequently passes upon that very grant, or would the people choose a cheaper or less able agent to build than to preserve, repair or wreck?

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EXTRACTS FROM COMMISSIONER LEGGETT'S REPORT DATED FEB. 23, 1872.

Reorganization.

The theory of the American system is to grant only valid patents, and at a cost so small as to make them obtainable by inventors of very small income. Under the protection of these patents, manufacturing is opened to the inspection of the world; and when the patents expire, the public may understand the processes and make the devices.

* * * * *

To give an inventor an instrument that shall afford him full protection for all he has invented, and yet restrict him from invading the rights of the public or of other patentees, is, in theory, the duty of the Commissioner of Patents. To discharge this duty, however, requires such a combination of expert knowledge, legal attainments, judicial ability, and executive talent as is rarely, if ever, found in any one person. Hence, in the very infancy of the Patent Office, an examiner was appointed to assist the Commissioner in his work. He examined applications and reported to the Commissioner, and the Commissioner in person determined whether patents should or should not issue, and what amendments and alterations should previously be made. But for many years the number of applications has been so great as to make this personal attention of the Commissioner, except in special cases, an utter impossibility. * * * When an examiner decides to pass a case for issue there is no review of his decision, unless by accident the Commissioner's attention is called to it, which very seldom happens, as the proceedings are secret and *ex parte*. The same is true in rejections, except when the applicant pays an extra fee and takes an appeal. The result is that many patents are issued that should never be granted; others, on good inventions, are issued in improper form and with bad claims; and many applications covering valuable inventions are rejected and lost to worthy inventors.

With so many tribunals authorized to give final decisions there can be scarcely an approximation to uni-

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formity of practice on the very matter where accuracy and uniformity is most to be desired. This evil has become so great as to furnish to many persons an argument against the entire system of preliminary examinations. The fault, however, I am fully convinced is in the *organization* of the examining system, and not in the system itself. The fault in the present organization is more serious and fundamental than the mere want of uniformity in decisions.

* * * * *

To briefly recapitulate:

Our present system is defective in this: The applicants and their attorneys have direct access to the examiners. The examiners determine all questions of fact and of law, and pass cases for issue or reject them. Practically there is no review of their decisions, except as appeals are taken in rejected cases. From their decisions passing cases for issue, the proceedings being *ex parte*, there is no appeal. The result is, many bad and interfering patents are issued, inventors and manufacturers too often are put to great and needless expense to determine their rights, the public confidence in the office is diminished, and the validity of all patents issued is suspected.

To remedy this, I suggest that all authority to pass for issue or reject be taken away from the examiners; that they be limited exclusively to the duty of making examinations; that the examiners be divided into nine groups; and that a competent man, educated in law, in science, and in mechanics, be appointed at the head of each group, under the designation of chief examiner, or such other title as may be given him by law; that the examiners report the results of their examinations to these chiefs, and that chief, in his own group, determine the questions of passing to issue or rejection, after giving the party a full hearing; that appeals from these decisions be to a board of appeals, consisting of not less than three of these chiefs, to be selected by the Commissioner, and changed from time to time, as often as he may deem necessary and proper. Under this arrangement, the present board of examiners-in-chief would be unnecessary and could be dispensed with. The chiefs being familiar with patent law, each could be intrusted

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with the examination of interferences arising in his own group, and the office of examiner of interferences could be abolished.

* * * * *

Patent Office As An Independent Bureau.

The business of the Patent Office is of such character that it is neither understood nor fully appreciated, except by those whose duties have brought them into close relations with the Office. The classification of the employes, and the special qualifications they must possess to properly discharge their duties, are radically different from any other bureau or department. There is scarcely anything in the purpose for which the Patent Office was created, in the duties which it has to perform, or in the plan of its organization, that is at all analogous to the bureaus with which it is associated.

For these reasons, its connection with the Department has always been of the most nominal character. It has had all the disadvantages of such connection, with very few of its benefits. The duties and necessities of the Office are such that it seems to me they ought to stand out alone before the country and before Congress. I feel quite confident we should then get better legislation for the Office, and better work from it. The more rank and dignity that is given to an official position, the better men can be obtained to fill it, even at the same salary. A subordinate position in a bureau has so few attractions, except salary, that I fear it will be difficult to obtain the services of men of the proper character, scholarship, and legal attainments to fill the important and responsible positions suggested in a reorganization of the Patent Office. I would, therefore, respectfully invite your attention to the propriety of severing the Office from the Interior Department, and its establishment as a department by itself. Until this is done it will be difficult ever to secure for it the legislation its importance demands, and still more difficult to retain in its subordinate positions the class of talent necessary to the proper discharge of its duties.

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EXTRACTS FROM THE REPORT OF THE INVESTIGATION OF THE UNITED STATES PATENT OFFICE MADE BY THE PRESIDENT'S COMMISSION ON ECONOMY AND EFFICIENCY DECEMBER, 1912.

A Court of Patent Appeals.

For several years members of the American Bar Association and many other attorneys have been urging upon Congress the enactment of a law to create a court of patent appeals to have the jurisdiction on appeal from United States district courts that is now exercised by the circuit court of appeals of the nine circuits. Bills to create such a court have been introduced in Congress for several years and are pending at the present time. Patents are effective in all parts of the United States and its Territories. The extent of the patent, the question whether it is valid or has been infringed, and every question relating to it are subject to what is practically a final decision in each of the nine circuits if suits are brought therein.

While this commission is not called upon to make a recommendation upon the subject, it invited those who practice before the Patent Office and others interested in patents, to submit their views on the question of the advisability of creating a court of patent appeals. The answers received indicate that the opinion is practically unanimous that such a court should be established. The opinion is also expressed by some that when such a court shall be created, it should be charged with the duty now devolving upon the Court of Appeals of the District of Columbia to hear appeals from the Patent Office. The one question submitted by the commission to the attorneys and others did not include a request for an opinion as to the manner in which the court should be constituted nor as to any details concerning its organization and jurisdiction.

The commission submits no recommendation or suggestions upon the subject, as the resolution under which it is working does not require or contemplate that it shall do so. It merely states the almost unanimous view of the attorneys and inventors.

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Appeals from the Patent Office to Courts.

There appears to be an idea quite generally accepted in this country that a citizen is entitled to have any question of fact or of law finally decided by the judicial branch of the Government. So far as decisions in patent matters are concerned, the policy of allowing every question decided in the Patent Office to be reviewed in a court, is one that has existed from the beginning of the patent system. It may be that the Patent Office has never been organized and equipped in a manner to justify the making of its decisions on any points final and conclusive on the parties. It would seem that there are many questions which arise in or come before the executive branch of the Government that could be finally settled by administrative officers and thus recognize them as administrative courts, as they really are in fact. This is peculiarly true of the questions arising in the Patent Office. They have no connection with the general business of the Government, and arise in the disposition of a class of work that is highly technical and requires the services of men peculiarly qualified and devoting their lives to the study of such questions.

While the commission makes no recommendation upon the question of a change in the jurisdiction of the courts in patent matters it suggests that it would probably be advisable to modify section 4915 of the Revised Statutes providing the applicant with a remedy by bill in equity in any court having jurisdiction after his application is refused by the Patent Office or the Court of Appeals of the District of Columbia upon appeal from the Patent Office. It is also a serious question whether when parties have fought out an interference proceeding in the Patent Office and have carried it on appeal to the Court of Appeals of the District of Columbia, the final decision should not be binding upon all the parties to the interference, thus preventing the question of priority being taken up *de novo* in another court. * * *

There is a general complaint, although the commission is not advised as to the facts in the matter, that a grant of a patent is of no value to an inventor if it is to the interest of any person or corporation of financial strength to infringe it. The results after a patentee wins an infringement suit are often not of real benefit

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to him, for if he survives the suit the actual recovery of adequate damages is exceptional.

It would seem that the remedy for many of the difficulties of the present situation regarding patents will be found in the development of the Patent Office as an administrative court in which all questions relating to patents, excepting the question of infringement, will be finally decided, subject only to a review by an appeal to a court of patent appeals, with possibly a provision for certain questions going to the Supreme Court. Giving such jurisdiction to the Patent Office and to one court will tend to the development of a system of patent law that will be a benefit to the public and a protection to real inventors.

The commission has been unable to see the benefit of the present system by which every question relating to a patent can be litigated in any part of the country. The establishment of a court of patent appeals may be a step in the right direction, but it is believed if that court is established and the Patent Office is developed as it ought to be as an administrative court of the highest type the next change will be on the lines here suggested. This is a question, however, for consideration 10 years or more from the present time, and the manner in which it is settled will, of course depend upon the policy adopted with reference to the Patent Office. If that Office is to be, as in the past, the authority to grant a patent under an examination system which is in practice about half examination system and half registration system, the complaints concerning our patent system will continue, and it would not be possible to follow the plan here suggested. If, on the other hand, the Patent Office shall be built up to a high state of efficiency, the adoption of such a plan will be a natural and desirable result.

* * * * *

Patent Office as an Independent Bureau.

A question of very considerable importance in connection with the administration of the Patent Office is that relating to the administrative authorities superior to the Commissioner of Patents.

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The Patent Office has been a bureau of the Department of the Interior since the creation of that department in 1849, covering the entire period of the great activity of the office. The nature of the business committed to the Patent Office has no relation to other work carried on in the Department of the Interior nor, as a matter of fact, is there any particular connection between the work of the several bureaus in that department. There is no good reason why the Patent Office should be transferred from the Department of the Interior to any of the other executive departments. Its work is so independent of the other activities of the Government that it can be as well carried on under one department as another.

The question has been raised many times as to the advisability of making the Patent Office an independent bureau. In 1903, when the Department of Commerce and Labor was created, consideration was given to the subject of transferring the Patent Office to that new department. The control of the Secretary of the Interior over the work of the Patent Office is merely nominal; no appeal lies to him, nor has he any authority to control the decisions of the Patent Office. He is charged with the duty of appointing all employees of the Patent Office, but these appointments are subject by law to the nomination of the Commissioner of Patents. The Secretary has supervision of the disbursement of appropriations for salaries in the Patent Office and appropriations made for the repair and maintenance of the building in which the Patent Office is located, and the appropriations for furniture, equipment, and miscellaneous expenses of the Interior Department are expected to cover the needs of the Patent Office as well as of many other bureaus in the department. It is but natural in this department, as in other executive departments where one appropriation is made for the Secretary's office and numerous bureaus, that in the allotment of equipment and supplies, as well as in the repair of the building, the needs of the clerical force attached to the office of the head of the department will be given preference over the needs of clerks or officials of similar or higher rank in bureaus of the department * * * when the Patent Office shall have been moved into a building espec-

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ially adapted to its needs, it is believed that every consideration of good administration and of the building up and improvement of the office to the highest state of efficiency will demand that it be made in fact an independent bureau, subject to the supervision of the President where any supervision is needed.

* * * * *

Proposed Plan of Administration.

The Commissioner of Patents should be charged with all the duties now required by law except those which relate to the decision of cases on the merits on appeal. He should be assisted by one assistant commissioner who should act as commissioner in the absence or disability of the commissioner. There should be provided a force of supervising examiners or inspectors who should be directly under the commissioner and perform such duties of inspection and supervision only as might be assigned to them by the commissioner, but without authority to direct the work of examiners. They should examine the character of work as well as the quantity being performed in the several examining divisions and by individual examiners, and should report their recommendations to the commissioner. It should be the duty of the commissioner to issue from time to time such instructions in regard to the methods of examination and of performing the technical and clerical work of the Office as he might deem necessary to keep the Office up to the proper standard of efficiency.

Under such a plan it is believed that the commissioner and assistant commissioner could be informed at all times of what was being done in each division, and by means of instructions as to methods could make certain that there was uniformity in the character of work turned out from all branches of the Office.

Another duty of the commissioner under such a plan would be to order any case passed for allowance by a principal examiner to be reviewed summarily and without a hearing by the board of examiners in chief. Should the board on review decide that the application should be rejected, that action would be taken by the principal examiner, subject to an appeal by the applicant to the board as in other cases of rejection.

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It has been suggested that a force of about eight supervising examiners be employed with the duty of supervising five or six divisions each, and consulting with and correcting the work of the principal examiners in charge of such divisions. A similar plan was recommended by the Commissioner of Patents in 1877. He proposed nine chiefs to decide upon the examination work of the examiners. The commission is of the opinion that such a plan would result only in establishing what is practically another appeal between the principal examiner and the board of examiners in chief, or would result in the supervising examiner taking the responsibility for such a large number of cases that he could not give them proper attention. The duty of a principal examiner is now sufficient for one man and ought, in fact, to be reduced if the best results are to be obtained. To make him in effect the subordinate of the supervising examiner would relieve him of responsibility and place that responsibility upon the supervising examiner whose judgment in passing on five times as many cases as the principal examiner, would not be of great value.

The commission is of the opinion that no officer or tribunal between the principal examiner and the board of examiners in chief should be created. It is convinced, however, that there should be a closer supervision over the action of principal examiners, especially in the grant of patents, and that that supervision should be exercised by the Commissioner of Patents with the aid of seven supervising examiners acting under his direct instructions and sitting together in considering and reporting to the commissioner on questions of method and procedure. With such a force of competent men the commissioner would be able to perform many of the duties which it has been impossible for him to perform in the past. Such duties relate to the important subjects of difference of opinion as to what is patentable, variation in methods of examining, and deciding the merits of applications for patents, and the issue of patents that ought not to issue. * * * The plan of regrouping must necessarily wait, however, upon the initial completion of the entire plan of classification of United States patents.

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THE PATENT OFFICE FROM 1828 TO 1836.

By WM. I. WYMAN.

Dr. William Thornton, the first Superintendent of the Patent Office, died on March 27, 1828. His successor in office was Dr. Thomas P. Jones, who withdrew from the position the next year, after charges of maladministration were filed against him by William Elliot. Dr. Jones was the editor of a scientific paper and a correspondent on technical matters, but his brief occupancy of the position was unaccompanied by any noteworthy incidents.

Dr. John D. Craig was appointed his immediate successor and signalized his administration through the display of an aggressive and strenuous personality. Early in his official career he took pains to point out to Congress, concerning an unexpended balance turned into the Treasury, that "at present the Patent Office is a source of revenue; which, it is presumed, the framers of its laws never intended; and the compensation received by those connected with it, is far less, in proportion to their labor and responsibility than in any other office of the Government within the District," which discloses how hoary with historical precedent is this complaint and what a charmed life this condition of legislative indifference bears.

As an indication of the vigorous methods by which he performed his official duties, the following characteristic protest to the Secretary of State (dated July 11, 1831) of an appointment of a candidate for clerkship is a fair example:—"The man about three years ago, married a young lady with a large fortune, and in a short time spent the whole of it in dissipation, with abandoned associates. I hope a public office will not, during the present administration, be the reward of such conduct." No words minced here! With even less reticence but with equal eagerness to guard the sanctity and quality of official employment, he served the subjoined letter of appointment on a successful candidate for office:—

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Patent Office, July 3, 1834.

Sir,

As you are now appointed a Clerk in this Office, I think it necessary, candidly to inform you of what character I understand you bear in Washington; and I have it from the President, that he has had similar information on the subject, though he is not inclined to believe it true, & I sincerely hope it is not.

You are represented, as a man of disagreeable temper and constantly endeavouring, to undermine and supplant others in the offices in which you have been. You are also stated to be a very inferior Clerk. Such are the common reports in this City, and I have it in charge from the President to inform him minutely how far such character or any part of it, shall prove to be true, and he has assured me, that your stay in the Office will depend upon your conduct, contradicting said reports.

With regard to the duties of the Office, they are both important and laborious, and require both talents and attention, the hours of attendance throughout the year are from 9 to 3 o'clock, and no encouragement to visitors except on the business of the Office, is to be given to any person, or any conversation permitted with visitors, except on subjects of the same kind, and it is an invariable rule, that no one belonging to the Office, shall absent himself or leave the Office, during Office hours, without permission.

Thus with perfect candour & good feelings to avoid future misunderstanding, have I made this communication. I am,

Your humble servt.

To Docr. Mayo. John D. Craig.

Never was such a cordial invitation issued except that of a noted publicist who during a time of intense political controversy welcomed his antagonists with bloody hands to a hospitable grave. Needless to say that the "Docr." refused to accept the implications accompanying the appointment, although he did accept the latter after a violent verbal altercation with his gentle but admonitory friend. With the exception of the filing of charges and countercharges by these two worthies in a subsequent official controversy, no further criminations and recriminations appear to be of record, and "Docr." Mayo continued to work under the candid eye of his solicitous superior throughout the whole of the latter's incumbency of office.

Dr. Craig's career continued to be turbulent and rocky. He avoided smooth sailing if he could possibly chart his voyage in rough seas. Applicants before the Office took a hand in getting in his way, and finally one William P. Elliot (later famous as the architect of the Patent Of-

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fice) endeavored to oppose his will, with the result that the most serious and best sustained of all accusations were lodged against him. Dr. Craig was charged with ignorance of the law, destruction of public correspondence, rude conduct in his official relations and other malfeasances. Apparently, the charges had some basis, as he was ordered by the Secretary of State to correct the abuses. Later, the persistent Mr. Elliot presented further charges, such that Dr. Craig pronounced an order by the late Secretary of State "tyrannical and unjust," and upon this latter being sustained, he was dismissed from office on Jan. 31, 1835.

He was succeeded by J. C. Pickett, whose appointment appears to have been of an emergency character, as he held office for but a few months. On May 12, 1835, Henry L. Ellsworth, of Hartford, was appointed to the position at a salary of $1500. He was its last occupant and was the first Superintendent of Patents who administered the Office efficiently. There was no laxity in the execution of the law, the records were kept up to date and the Office run smoothly, without that friction that seemed to characterize hitherto every administration under the Act of 1793.

During the period under review, the Secretaries of State were the final arbiters of all questions arising in the Patent Office and exercised a constant supervisory authority over its acts. In those days, cases of doubt as to the grant of the patent were decided by the Secretary of State and legal questions were settled by the opinion of the Attorney General. Models were required to be filed in all apparatus cases.

On July 4, 1836 the present system was inaugurated and Henry L. Ellsworth was immediately thereafter appointed the first Commissioner of Patents.

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MORE THORNTONIANA.

In the article on "The First Chief of the Patent Office," which appeared in the December number of the JOURNAL, reference was made to a communication by Dr. Thornton to the Secretary of State, defining the equities and limitations of a reissued patent. A copy of that communication, dated January 6, 1818, has been obtained from the files of the State Department. The case involving this subject-matter was presented for Dr. Thornton's consideration through the pronouncement of a United States Judge acting on the original patent, and the Doctor referred the matter to the Secretary of State, in the letter noted, which follows:—

Department of State,
Patent Office, 6th Jan. 1818.

Sir:

A patent was issued on the 16th of July 1806 to John Bedford of Phila. in the usual form, containing the specification of his invention in his own words. After enjoying the benefit of his patent for these 12 years past nearly, Judge Story, one of the Supreme Judges, acting in this case as a Circuit Judge, pronounces that the specification is "not" *sufficiently* specific, and that there ought to be a new patent issued. This was made known to me by George Sullivan, Esq., of Boston, the counsel of Wm. Bedford. I sent to Wm. Bedford an answer, a copy of which is enclosed, marked No. 1, and have since received the letter No. 2, from Wm. Sullivan; who still urges a patent upon the general principle, which I must in duty decline to issue, upon this plea.—If a patent were really imperfectly issued by an official irregularity, or for the want of legal forms, dependant on the office, even then the demand of the patent would be a doubtful one, provided the patent had run for some years, and the patentee had obtained the full benefit of the patent till arrested by a determination against him in law, from a want of validity in his patent; but it would be proper in this case to correct the patent, from the time of such legal arrest, to give validity for the remainder of the term; which I am even willing to do in this case, without a new Treasury Fee, though the incorrectness was not the fault of the office, but of the Patentee himself. But to give a new Patent for the general principle, when the Patent has nearly expired, and the patentee has till now enjoyed the profit thereof, would be to rob the public of the benefit acquired by the fulfillment of the engagement virtually entered into by them and the patentee, which would open a door to increasing deception and fraud, and would really be a stultitian premium.—If therefore Wm. Bedford wishes a patent upon the general principle of his invention (which, however, I firmly believe is not his, having been in use in Ireland for many years, and the army of

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England has long been furnished with boots and shoes on this principle) I will grant it till the expiration of the first term of 14 years, without any additional fee, as a correction of his erroneous specification, though this is not an official duty nor could he of writing demand it; or, if he had a patent for any *specific* mode, as an *Improvement* in the general principle I will grant him a Patent for 14 years, avoiding the 2nd Sect. of the Patent Law, in the several Forms, and on his paying the Treasury Fee as a mere Improvement, but not on the general principle, unless directed to do so, by the Hon. Secretary of State, who will please to decide on this, or submit it to the Honorable Attorney General; if it is a case that may be hereafter considered as a precedent.

I have the honor to be, with the highest respect,

William Thornton.

Hon. John Q. Adams,
Secretary of State, U. S.

In the same article on "The First Chief of the Patent Office" there was related one of the most striking incidents in a career rich in dramatic features. It concerned the success of Dr. Thornton in preventing the destruction of the Patent Office by the British troops during the War of 1812. Various historians have told this story with varied presentations, but it seems that the Doctor was himself a chronicler of capabilities, and his own account of the affair, while not as dramatic and colorful as those of his rival historians, has the possible merit of greater accuracy.

The following account of the incident is an extract from a letter written by Dr. Thornton in the *National Intelligencer* of Sept. 7, 1814, (published in this city) a photolithographic copy of which is preserved in the room of the Commissioner of Patents:—

"Hearing the next morning, while at breakfast in Georgetown, that the British were preparing to burn the War Office and the public building containing the models of the arts, I was desirous not only of saving an instrument that had cost me great labor, but of preserving if possible the building and all the models—I therefore left my breakfast and hastened forward, determining to request the first known democrat I should meet to accompany me, lest the malevolent should insinuate that I had in any manner held an improper communication with the invaders of the country—I met with Charles Carroll, Esq., one of the most respectable gentlemen in the District, I begged him to accompany me for the reasons given; he very politely attended me. We arrived at the very moment when the English Col. Jones and his men were proceeding to burn the War Office; Mr. Carroll had already accompanied the Mayor of Georgetown in a peace deputation and was therefore known to some of the officers; he informed Col. Jones that I had waited on him to request permission to take out of the Patent Office a musical instrument; the Colonel immediately replied, that

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as it was not their intention to destroy any private property, I was perfectly at liberty to take it. After the War Office was burnt, I entreated Mr. Carroll to accompany me to the Patent Office, but he proceeded only to my own house and told me he must return. He did so; and I went to the residence of the Mayor to ask him to accompany me to the building, he was out of town; I next called on Mr. Nicholson, my model maker and messenger, and desired him to attend me, he did, and the British soldiers were then marching in two columns to burn the building. When we arrived there we found the Revd. Mr. Brown, Mr. Lyon, and Mr. Hatfield near the Patent Office. Major Waters, who was then on guard and waiting the command of Colonel Jones, informed me that the private property might be taken out, I told him that there was nothing but private property of any consequence, and that any public property to which he objected might be burnt in the street, provided the building might be preserved, which contained hundreds of models of the art, and that it would be impossible to remove them, and to burn what would be useful to all mankind, would be as barbarous as formerly to burn the Alexandrian Library for which the Turks have been ever since condemned by all enlightened nations. The Major desired me to go again with him to Col. Jones, who was attending some of his men engaged in restoring Mr. Gales's types and printing apparatus. I went to the Avenue and was kindly received by the Colonel; they took their men away and promised to spare the building. I then returned satisfied without seeing any other British officer, and went out of the District with my family. On Friday (26th) I returned to the city lest any inferior officer, not knowing of this promise, should set fire to the building; but I found the British were gone, except a few sick and wounded men and their attendants. Finding the Mayor not yet in the city, I, as the only Justice of the Peace, appointed a guard at the President's House and Offices, another at the Capitol to prevent plunderers who were carrying off articles to the amount of thousands of dollars."

The copy of Dr. Thornton's communication of July 6, 1818 and the Doctor's account of the saving of the Patent Office were both made available for publication in the JOURNAL through the efforts and consideration of former Commissioner Thomas Ewing, to whom we are indebted for procuring the copy and calling attention to the location of the record. W. I. W.

It is understood that plans are being formulated for the outright sale by the Alien Property Custodian of a considerable number of German-owned dye patents.

A special agent attached to the American Peace Mission is now abroad making an exhaustive study as to the status in enemy countries of American-owned patents, trade-marks and copyrights.

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A UNITED STATES PATENT COMMISSION.

By JOHN BOYLE, JR.

The office of Commissioner of Patents was created in 1836. The duties then assigned to the Commissioner have not since been materially changed notwithstanding that they have increased enormously, both in character and quantity. That the present organization of the Patent Office is not satisfactory can be seen by the numerous suggestions continually arising for patent reform. Most of these suggestions, however, are based on a repatching of the present organization. If at some time in the future Congress shall see fit to delve into this vital question, it is to be hoped that instead of attempting to remodel a system never intended for present conditions, they will remake the whole organization from the ground up.

One of the principal faults with the office of Commissioner of Patents is that it lacks stability. The work of the Patent Office is of a different type from that of the usual Government bureau. There are some bureaus where a change in the head of the bureau is effected for the very purpose of carrying out a different policy, one which the federal administration has sometimes pledged itself to carry out. But the Patent Office is somewhat similar to the courts when exercising its principal functions. Its policy should be a consistent one. For example, the Supreme Court of the United States in the past century has handed down many fundamental decisions on questions of patentability, so many in fact that it would seem as if there ought to be a stable policy on the part of the Office in the granting of patents. Yet anyone who has followed the affairs of the Patent Office knows that no two Commissioners have exactly the same ideas on this subject. As the attitude of a Commissioner changes, so must the point of view of the examiners change. Accordingly the Office policy may be such as to see invention in slight differences of construction; whereas at other times a much more conservative policy will prevail. It must be admitted that a changing policy is detrimental to all concerned, and an organization that

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will tend to stabilize the policy of the Office will be to the ultimate benefit of the patent system.

Another defect in the office of the Commissioner is that it is impossible to record the wishes of the interested public. To illustrate, the examining corps of the Patent Office was at one season addressed by two of the most distinguished patent attorneys of the country and by one of the most learned judges in patent law. All of these vigorously protested at the allowance by the Office of patents containing a multiplicity of claims to the utter confusion of everyone subsequently involved. There was no official way of registering this protest, nor has there been any marked change in the policy of the Office in this respect.

There are many other defects in the present organization which have been pointed out by other writers and which will not be reiterated here.

It is believed that the substitution of a patent commission, coöperating with a patent advisory council, would overcome many of the defects of the present office of Commissioner of Patents.

The Commission might consist of three members appointed rotatively for six years by a new appointment every two years. One member should be skilled in patent law, one in general law, and the third a technical expert. The diversity of accomplishments presented by such a commission is well beyond that now presented by any tribunal which comes in contact with the patent system. The relative permanency of the Commission would provide stability in its decisions and any possible tendency to narrowness would be avoided by the gradual changing of its membership. To take charge of general administrative duties, there should be a secretary to the board. Having established such a commission, the necessity of the Court of Appeals of the District of Columbia as an appellate tribunal would cease to exist, for appeals from the Board of Examiners-in-Chief would receive such a thorough consideration from such a varied and qualified standpoint that the court might well hesitate before reversing the holdings of the Commission.

In order that Congress and the Commission might keep in touch with and have the benefit of the advice of

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those most directly affected by the patent system, there should be established a patent advisory council composed of twelve to twenty representatives of industry and the patent and legal profession. It would be the province of this council to furnish a means of registering the will of the interested public. To some extent this function is now usurped by the patent bar associations.

The plan of organization here advocated is not generally new and in various phases can be found in other Government bureaus. The point above all that it is desired to make is that if any changes are to be made it must not be merely a repatching of the old organization. It is with the object of avoiding this situation that the plan of a Patent Commission is put forth.

FOREIGN PERIODICAL ACCESSIONS TO THE SCIENTIFIC LIBRARY.

The Scientific Library is again receiving the principal German periodicals that ceased coming during 1915 on account of the blockade of Germany by the Allies.

The release of these publications from the blockade was secured through the efforts of the American Library Association Committee on Importations acting through the State Department, and the Library files of the following periodicals for 1918 are now nearly complete and are open to inspection:

Annalen der Physik
Annalen der Physik, Beiblatter
Berichte der Deutschen Chemischen Gesellschaft
Berichte der Deutschen Physikalischen Gesellschaft
Die Chemische Industrie
Chemisches Zentralblatt
Deutsche Bauzeitung
Dinglers polytechnisches Journal
Elektrotechnische Zeitschrift
Gluckauf
Jahrb. der drahtlosen Telegraphie und Telephonie
Journal fur praktische Chemie
Kolloid Zeitschrift
Kunst und Kunsthandwerk
Physikalische Zeitschrift
Zeitschrift fur Analytische Chemie
Zeitschrift fur Anorganische und allegemeine Chemie
Zeitschrift fur Architektur und Ingenieurwesen
Zeitschrift fur Instrumentenkunde
Zeitschrift fur Physikalische Chemie
Zeitschrift fur Transportwesen und Strassenbau

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A PROPOSED REORGANIZATION OF THE EXAMINING CORPS.*

(Considered in its Relation to Other Patent Reforms.)

By BERT RUSSELL.

The purpose of this paper is to "break the ice" in regard to two oft-repeated proposals of self-appointed reformers: (1) to so reorganize the Commissionership and Assistant Commissionerships of Patents as to constitute a Patents Commission (with all the authority but not all the detailed duties of the present Commissioner) and (2) to give to an enlarged and strengthened Board, subordinate to that Commission, a degree of supervisory authority corresponding to an intended expertness of its individual members in particular fields; also, (3) to consider the relationship of these to other proposed reforms.

Numerous troublesome problems, from contact with which even subordinates of the Office cannot wholly escape, certainly are very closely interconnected. Even the providing of a proper building (which is for the moment rendered less urgent by the moving of the Secretary's offices) would seem to presuppose a determination of the numbers, the organization and the equipment to be housed. But, in turn, the establishment of a suitable organization does seem, in this case, to wait upon the subdivision of search materials, as perhaps the latter must reflect in turn something of the standards of patentability that may be considered acceptable.

The efforts of the present writer to judge what the Office organization ought to be have, as a matter of fact, arisen directly from his connection in a subordinate way with the work of reclassification—in which any genuine advance has seemed to require some comprehensiveness of view. Now, if one tenth of the work of the Office

*This paper relates, in large part, to suggestions heretofore communicated, on the personal responsibility of the writer, to the Patent Committee of the National Research Council.

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shall (upon the completion of some general survey not known to be now even projected) be found to relate to *chemical* inventions (defined in terms of specified substances associated for an indicated effect dependent on their specific properties), and if *electrical* inventions (defined with reference to currents, fields, capacities, potentials, reluctances, and so forth, and not including generally organizations in which, for example, an electric motor or an electric heater may be a merely subsidiary part of an organization for a mechanical operation) form another tenth (or a twelfth, or an eighth); and if *non-electrical motors, engines* and related inventions form another tenth, or other fraction, then this ascertained situation would seem to some of us (who hark back to a very ancient proposal) to argue for a *corresponding grouping of divisions* having work of like nature, with a view to numerous administrative advantages to be hereinafter referred to, even if in very general terms.

The point is often made, as well by those within the Office as without it, that the Patent Office should be taken more completely out of politics. For altho it certainly could not justly be implied that the grant of patents has heretofore depended on "political pull," it seems to be generally agreed (see President's Commission on Economy and Efficiency, p. 34) that appointment to the higher positions of the Office should not require concurrence of the Senate, and that tenure should be, as in other judicial offices of both higher and lower rank, independent of political changes. Without antagonizing the known views of anyone in authority, it may then be urged, altho with little originality, and with no slightest hope of an unqualified general concurrence as to every detail, that by

(1) Substituting for the Commissioner and Assistant Commissioners of Patents a *Patents Commission* of (say) four members.

(2) Enlarging and strengthening the Board of Examiners-in-Chief, at the same time giving to the ten or more consequent members each a supervisory authority over a small group of divisions,—to constitute what is herein termed a "department"—as to whose work each should be expert.

(3) Adopting a parallel grouping of
(a) related divisions,
(b) patents in orderly arrangement, and
(c) departmental libraries, and

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(4) Providing each of the proposed expert Supervisory Examiners, collectively constituting the Board of Examiners-in-Chief, with (say) three special assistants—

one expert in the literature and classification and questions of "division" within his field,
one to advise as to all questions of "interference" arising within that field, and
one to advise in regard to the delayed cases and miscellaneous legal problems of that field—as perhaps also as to the routine work and personnel therein,

(the examining organization then becoming somewhat as in the diagram herewith), there might reasonably be expected to ensue notable reforms or advances in the following respects:

(1) The dignity of the Commissionerships would be enhanced by a diminution of obligatory duties with no corresponding diminution of its powers—as no doubt also by a substantial increase in compensation,

(2) The Commission being a permanent body, its policies would acquire a *stability* that appears impossible so long as each Commissioner may feel bound to reprove the party last in power by some marked deviation from former policy.

(3) A growth in *uniformity* of practice would seem assured by

(a) common supervision over related divisions constituting one Department,
(b) enabling Board members to actually enforce, each within his own Department, Board decisions in subsequent analogous cases,
(c) the participation by men who supervise within one field in the judicial work arising in other fields,

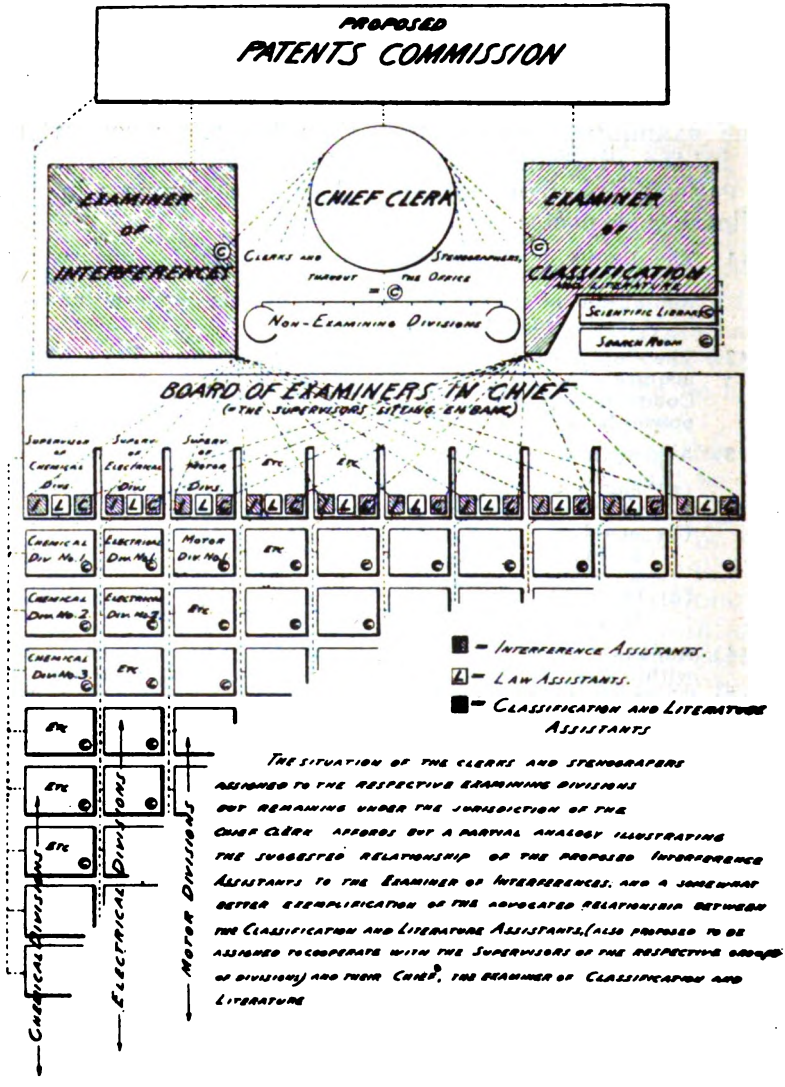
(4) Adequate literature could with reasonable economy be placed within easy reach of each group of related divisions.

(5) There should become possible the usual and well known advantages of "division of labor," such as

(a) gain in economy of effort and reliability of results by the mere limitation of the field of special responsibility of each,
(b) gain in interest, by encouragement of specialization,

(6) By a basing of the division of labor, in an organization dealing with mixed questions of fact and law, upon differences in the *sorts of engineering or practical knowledge involved*, a new and wholesome emphasis would seem to be placed upon underlying scientific and technical problems, as distinguished from mere technicalities of procedure. (It may be urged that for every *day's* special training upon *legal* considerations necessary to a correct determination of a motion for, say, the dissolution of some chemical or electrical interference, a *year's* training along chemical or electrical lines might be appropriate; and that this fact challenges the economy and expediency of an assignment of, for example, all questions of declaration to one law examiner and all questions of dissolution to another.)

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THE SITUATION OF THE CLERKS AND STENOGRAPHERS ASSIGNED TO THE RESPECTIVE EXAMINING DIVISIONS BUT REMAINING UNDER THE JURISDICTION OF THE CHIEF CLERK AFFORDS BUT A PARTIAL ANALOGY ILLUSTRATING THE SUGGESTED RELATIONSHIP OF THE PROPOSED INTERFERENCE ASSISTANTS TO THE EXAMINER OF INTERFERENCES, AND A SOMEWHAT BETTER EXEMPLIFICATION OF THE ADVOCATED RELATIONSHIP BETWEEN THE CLASSIFICATION AND LITERATURE ASSISTANTS, (ALSO PROPOSED TO BE ASSIGNED TO COOPERATE WITH THE SUPERVISORS OF THE RESPECTIVE GROUPS OR DIVISIONS) AND THEIR CHIEF, THE EXAMINER OF CLASSIFICATION AND LITERATURE

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(7) The existence of well-paid positions of some distinction and responsibility and *attainable on a merit basis* would encourage able men to stay in the service.

(8) If the Supervisors constituting the Board were sufficiently numerous to permit actual acquaintance by each supervisor with the work of all subordinates in his Department, *promotions* could be based upon either the quantity and quality of work done, or upon tests of scientific or practical information relating to a new position desired, rather than, as at present, upon the mastery of comparatively uncertain, arbitrary, unusual or unimportant technicalities of law, or of a fluctuating practice, for the ascertainment of which law and practice no suitable facilities have been provided.

(9) Classification lines could be more easily maintained (if once established) in proportion as there would be some consistent and visible embodiment of a classification plan.

(10) Experiments in method could be tried out within one department, without the risk of a general catastrophe. Commissioner Ewing long since suggested that in the case of process applications the requirements of the Office as to preliminary showing of operativeness might well be higher than is necessary in mechanical cases.

(11) If the respective Commissioners could be appointed not only for overlapping periods of (say) eight years each, but also with such reference to their special qualifications that one of them would always be skilled in (say) matters of interference, one in general equity practice and patent litigation, one in classification and general scientific literature, and one perhaps in his knowledge of the personnel of the corps and the field for its replenishment—all alike being keen to both the economic and the scientific bearings of the service—it would apparently become possible not only to introduce new threads of coordination thruout the entire system, and to provide to qualified men of proper ambition a more ample and stimulating menu of special opportunities for rare and genuine public service, but possible also in a relatively large number of cases (and perhaps most notably in matters relating to the prompt and just determination of interferences) to substitute for the uncertain action of multiplied appeals the direct and final action of enlightened authority.

(12) The Gazette could be published in sections corresponding to the respective Departments, and many patrons could thus be satisfied by a (more economical) subscription to a specified part.

The present proposal will be found to be essentially a revival and elaboration of certain conceptions advanced by Commissioner Leggett as early as 1872, and at that time supported, although without effect, by both Secretary Delano and President Grant. (Report of President's Commission, p. 238.) It bears similarity also to those separate recommendations of the President's Commission which favor (although as independent proposi-

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tions) (1) the regrouping of the corps (p. 65) and (2) the appointment of "seven supervisory examiners" as personal aids to the Commissioner of Patents (p. 13).

Having tackled a problem before which his betters hesitate, the present writer would beg tolerance in a specific opposition to one proposal of the last-named body, to wit, the proposal that the Supervisory Examiners should have neither authority nor appellate jurisdiction. He would advocate clothing them with both; increasing their number accordingly, although providing (as in the plan of Commissioner Leggett) that no man be relied upon to pass a reviewing judgment upon his own prior acts.

As to supporting sentiment already known to exist relative to the proposed strengthening of the Board, the present suggestions, altho widely advocated, suffer the disadvantage of hardly having become the subject of general discussion. One official high in authority—for whom the present writer must testify his very high respect—has suggested that he did not know as it would be of any advantage "to have a lot of highbrow professors around"; and it may no doubt be confidently asserted that in practical grasp the "scrubs"—if such they are—who are now "on the job" need fear nothing from a comparison, in point of general information, with any "thoroughbreds" that could be imported. It is the *position* of the Board, with reference to the permanence of its standards, its means of information, and the enforcement of its views, that is not strong; and the normal field for replenishment of the Board will no doubt presently again be the subordinate corps.

Comment has also been made that, under party rule, even the most urgent of calls for *highbrows* may sometimes result in an incursion of *low-brows*; but this is perhaps a slander upon democracy, or else a mere general defense of the *status quo*. A more serious objection is no doubt the actual, practical difficulty of the problem of *suitable subdivision*, in that the advantageous grouping of divisions does seem to imply a prior solution of some of the most difficult questions of classification.

Surely it would be superfluous to remark, in closing, that, so far as known, no one from the Office would ad-

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vocate anything like an interposition on the part of a National Research Council Committee, either momentarily or as a continuing collateral authority, in the *purely administrative* affairs of the Office. In so far as the underlying and primary purpose of the Office is educational, it is however, urged that any disposition to regard the classification of patents as a purely internal problem, or a problem whose solution must conform to the views of attorneys interested in the multiplication of grants (or to the views of those schoolboys upon whose searches, in patent matters, some attorneys seem to rely) is to be deprecated; and is to be corrected, if it can be corrected, only by those who can contribute not only information but a great deal of patient personal attention to its solution.

The present Examiner of Classification is remembered to have invited the attention of the National Research Council to the problems of reclassification. Assistant Commissioner Clay is among those who have still more recently emphasized the view that, as to this particular problem, the scientists upon the present Committee or within its reach undoubtedly can, whenever pressure of other duties will permit, give direct assistance of the highest value. And the President's Commission on Economy and Efficiency found (p. 65) that an effective regrouping of the examining corps must await the "initial completion of the entire plan of classification."

Patent *classification* is then a standing riddle whose solution seems prerequisite to a great number of other reforms, among which the improvement of the Office organization holds a prominent place. Reclassification is, moreover, a work for which the conditions of the Office are peculiarly unfavorable. That it is a problem of real inherent difficulty will further appear from the paper in this issue by Mr. Geo. A. Lovett, whose responsibility in the Classification Division has been next to that of its chief. Having participated for years (and with results the most meager) in this particular work, the present writer feels free to estimate that, under Office conditions of equipment, atmosphere and interruption, average efficiency in reclassification work has not risen and does not rise above perhaps five per cent. of what it might well be under reasonably favorable conditions.

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There is no controversy as to the fact that some of the work of reclassification has been badly done; none as to the fact that a bad classification, formally adopted, becomes a distinct new obstacle to a good one. But even men who, at least in a quantitative sense, have *failed* at this work do seems to feel that they *could* succeed under fairer conditions. If, in any way, suitable environment, force, and counsel, for the work of reclassification can at an early date be provided, the consequent debt of the Office and the public to those who may provide such aid will certainly be very great indeed.

"ART" CLASSIFICATION FOR OFFICE PURPOSES

By GEO. A. LOVETT.

A classification of search material for the use of the Patent Office examiner and for such of the public as make searches with like aims may vary widely from a classification for other investigators.

It may be noted that the existing classification of patents, dating, in part, into the ancient history of the art, and being the product of many men of many minds, exhibits almost every variety of classification; and one familiar with the field can draw therefrom illustrations of both the defects and the advantages of any of the proposed schemes.

Classification on the basis of *industrial* arts is frequently urged; but it seems totally impracticable in view both of the difficulties involved and the defects of the scheme as a searchable system. In the first place, there is the difficulty of selecting the arts to be embodied in classes. Industrial arts may be viewed from many different standpoints and in varied relationships. The types of instruments usually assembled for purposes of sale might form the groundwork of the scheme,—as 16, Builders Hardware, or 120, Stationery. Again, the assemblage might be on the basis of the place in which the instruments are used,—as 65, Kitchen and Table Arti-

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cles, or 211, Store Furniture. The basis of association might be a general use,—as 132, Toilet, or 46, Games and Toys; or it might follow the lines of the various vocations or professions,—as 17, Butchering, 31, Dairy, 32, Dentistry, 68, Laundry, 128, Surgery, and so on. Again the "art" might include everything relating to the manufacture, sale, and use of certain materials,—as 131, Tobacco; or it might be limited to the manufactures dealing with a specified material,—as 93, Paper Manufactures, or 125 Stone-working. All of these groupings, inconsistent as they are, have been embodied in existing classes, and others might be proposed.

A second difficulty arises from the fact that, no matter on what basis these arts are selected, they will necessarily intermingle and overlap. There is an industrial art relating to the manufacture of the automobile; but there are many subsidiary arts, as the art of tires, that of engines, that of speedometers, that of cushions, and so on, even down to roller bearings and spark plugs. The tire maker may also make machine belting and fire hose, and possibly rubber shoes, the cushion manufacturer is also engaged in the furniture business. Under such circumstances it would seem hopeless to attempt a comprehensive scheme of classification based merely upon the supposed industrial arts.

A further difficulty is the impossibility of locating patents with any certainty, or by any logical process, in these industrial art classes. This results both from the overlapping of the classes, and from the generic character of many of the patents. One patent may be for an alleged meat slicer, another for a device for slicing bread, another for a device used for "slicing cheese, meat, bread, and the like." Granting that all three are adapted equally for slicing any of the materials mentioned, should they be placed in the three different classes, 31, Dairy, including cheese cutters, 17, Butchering, including meat slicers, and 146, Vegetable Cutters and Crushers? And then what shall be done with a fourth to slice cork, and with a fifth so phrased as to make no reference to any specific material? Illustrations could be multiplied.

Furthermore, the purely industrial art classes comprise heterogeneous collections of material of little real

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similarity for reference purposes. What logical basis exists for associating in the same class milking machines and milking stools? Is a plant stand so similar to a seed tape or to a turpentine cup that they should be in one class? Or of what utility is it to have clothes lines, wash tubs and ironing tables grouped together?

Industrial use titles do not suggest either the function or the structure of the devices which may be found classified thereunder, and unless additional generic use classes are provided, generic patents, and those setting forth new uses of old types of structure, must necessarily be placed in classes not suggestive of the use.

A quotation from Professor Robinson is extremely pertinent. "It is moreover evident that the true place of meeting between the end and the means is in the *proximate result or function* of the means, and that the point from which the examiner must contemplate the means in order to discover its essential character is its *function, not* its ultimate effect." "The first duty, therefore, of one who examines the invention for the purpose of determining its essential character is to discover the real character of the *function performed.* * * He must discern the *actual change wrought* by the invention on its object." Robinson I. 315-317. (See also Rob. I., 230).

The enunciation of this idea of *proximate function*, i. e., the act which the invented instrument directly and necessarily performs, as a basis for classification is thought to mark one of the really important advances in the theory of patent classification. Attention should be called in this connection to the discussion of the subject in Mr. Sewall's booklet on "Classification of Patents," pp. 4-9.

It would seem clear that "art" in *this* sense is the logical basis for grouping the patents for *Office* purposes.

We sometimes hear the objection that classification on the basis of proximate function "scatters the art," or brings together "non-analogous arts." The objector apparently has in mind the *industrial* arts; for, if the devices grouped together perform a common function by similar means, the "art" in the other sense cannot be other than analogous. As was said by the Supreme Court in Howe Mach. Co. v. Nat'l Needle Co., 1890 C. D.

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281: "The art of turning is the art of turning, whether applied to wood or to metal." In that legal classic, the Stearns v. Russell decision, Judge Taft points out that a pneumatic holding device performs the same function when used in a pill-dipping machine for holding pellets that it does in a printing press when used for holding sheets of paper. Such a decision suggests at once to the classifier that pneumatic holding devices should be classified in one place, no matter for what machine or for what industrial application they were designed.

It is possible that some industrial or trade classes are useful to the extent that they provide a dumping place for certain patents of such anomalous character that they have no analogy, in the function performed, to devices employed in any other trade. It seems proper, however, to classify (for searches upon *novelty*) on such basis only as a last resort, rather than as a rule.

REPORT OF THE PATENT COMMITTEE TO THE NATIONAL RESEARCH COUNCIL.

The Commissioner of Patents in 1917, with the approval of the Secretary of the Interior, requested the National Research Council to appoint a committee to investigate the Patent Office and patent system, with a view to increasing their effectiveness, and to consider what might be done to make the Patent Office more of a national institution and more vitally useful to the industrial life of the country.

Mr. Thomas Ewing, who is a member of your Patent Committee, was the Commissioner of Patents who took that action.

The National Research Council, complying with the request, appointed a Patent Committee, consisting of: Dr. William F. Durand, Chairman; Drs. Leo H. Baekeland and M. I. Pupin, scientists and inventors; Drs. R. A. Millikan and S. W. Stratton, scientists; Dr. Reid Hunt, physician; and Messrs. Frederick P. Fish, Thomas Ewing and Edwin J. Prindle, patent lawyers. On the departure of Dr. Durand for Europe, Dr. Baeke-

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land was appointed Acting Chairman of the Committee.

Your Committee has approached its work in the belief that the American Patent System has been one of the most potent factors in the development of the prosperity of our country. Americans, being descendants of the European races, are not naturally more inventive than are Europeans, but under the incentive of the American Patent System they have produced many more inventions and been able to pay higher wages and live on a better scale than Europeans.

American inventions have played a vital part in the war. There is hardly any implement or explosive that our Army and Navy has used which is not more or less the result of American invention. The Patent Office is keeping secret and withholding from publication many inventions made since the beginning of the war and which are useful in war. After the war, it will be imperative that American inventors continuously improve American products and the manufacture of them and make basically new inventions to meet and keep ahead of the strenuous efforts which Germany and other nations will make to attain supremacy by these methods.

Your Committee has, therefore, carefully investigated the Patent Office and the patent system, with a view to increasing their effectiveness, and, based on its investigation and the experience of its members, makes the followin recommendations:

The Committee has concluded to propose a program consisting of but four features, because it believes those features are of such fundamental importance that their enactment into law would strengthen the entire system and directly and indirectly establish it upon a new and much more advantageous footing before Congress and the public; and because with a simple program, presenting comparatively little opportunity for difference of opinion as to the desirability of the changes proposed, there would be an unanimity of opinion in support of it which could not be obtained if the program were more extended.

A Single Court of Patent Appeals.

The first proposal which your Committee recommends is the establishment of a single Court of Patent Appeals

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that will have jurisdiction of appeals in patent cases from all the United States District Courts throughout the Country, in place of the nine independent Circuit Courts of Appeals in which appellate jurisdiction is now vested.

Until 1891 the Supreme Court of the United States was the appellate court in patent cases for all the lower courts. At that time the right of appeal to the Supreme Court in patent cases was taken away, and that Court now hears patent cases only upon writs of certiorari, which are never granted unless certain very unusual conditions exist.

The existence of nine appellate courts of concurrent jurisdiction in patent cases works serious hardships. While, theoretically, the law is the same in all of these courts, there has been an irresistible tendency to drift apart in the application of the law. It has even happened in a substantial number of cases that two of the appellate courts have taken a different view of one and the same patent. It is, of course, very important that the questions which always exist as to the validity and scope of a patent should be settled once and for all at the earliest possible date in the life of the patent, for, as a practical matter, seventeen years (the term of a patent) is a comparatively short time in which to reduce the invention to a thoroughly commercial form, to prepare for its manufacture, and to introduce it upon the market, and it is usually necessary to determine the validity and scope of the patent in order to determine the amount of money which it is safe to invest in exploiting the invention. As things are now, whichever party succeeds in the first suit that is tried on the patent, the other party is very likely to feel that in a second trial before another court he might have better luck. He, therefore, is inclined to insist upon a second litigation. Meantime, he advertises that the questions involved were not settled in the first case. This means uncertainty on the part of the owners of the patent as to their rights and uncertainty on the part of the public as to its rights to use the invention or to determine what it must avoid in working in the same field,—a really intolerable situation.

Moreover, we shall never have a uniform and definite

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patent law, consistently applied, until we have a single Court of Patent Appeals independent of local sentiment, realizing a responsibility to fix the principles of the law and enforcing an harmonious application of these principles on the lower courts. It would be of the utmost value to those in the United States who are engaged in industry if the present confused condition could be corrected and a single tribunal devote itself to crystallizing the fundamentals of the patent law and to educating the courts throughout the land to uniformity in applying these principles in special cases.

Attached hereto is a copy of a bill for the establishment of such a court, which has been advocated for many years by the American Bar Association, and is No. 5011 of the House of Representatives, 65th Congress, 1st Sess. It provides for a court of seven members, which would sit in Washington, with a Chief Justice appointed for life by the President. The appointment of the Chief Justice for life is in order that there may be an element of continuity in the court. The other judges are to be selected by the Chief Justice of the United States Supreme Court from the various District and Circuit Judges throughout the land, and each is to sit on the Court of Patent Appeals for a period of six years, or longer, if reappointed.

There are many advantages in this plan. Among them are the following:

The judges would not be men who were appointed as judges primarily to deal with patent matters. There could be no charge that special interests had a hand in their selection or that they were chosen to promote special views as to the patent law and its application. They would be men who had been primarily selected by the President as fit to be Federal Judges in the localities where they live. Federal Judges are men of a high type, and many of them are broad-minded men, much respected in the communities which they serve. They would take up the work of the Court of Patent Appeals with a breadth coming from the performance of their general duties of judges in their own circuits or districts and would, therefore, escape the narrowing which so often comes from continuous work in a specialized field.

The Chief Justice of the United States Supreme Court

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would select from the District and Circuit Judges throughout the land men whom he thought most competent to serve for a term of the Court of Patent Appeals. He would seldom, if ever, take more than one judge at a time from any one circuit. The court, therefore, would be made up of men who were primarily judges and who would be recognized as bringing to the Court of Patent Appeals the instincts and feelings, on the subject of the interpretation of the patent law, of the courts and of the people in the communities in which they live.

Undoubtedly many of them would only be on the appellate court for one term and after that they would go back to their circuits or districts with a training as patent judges such as could only be obtained by sitting for a period of years in such an appellate court. They would not only be qualified as patent judges, but they would reflect the atmosphere of the appellate court and cause that atmosphere to pervade their own neighborhood. They would thereafter undoubtedly be selected to hear patent cases in the lower courts in preference to judges who had not had training in the Court of Patent Appeals. The courts throughout the country would, in time, become educated to the high and definite standards established by the Court of Patent Appeals, not only by study of the decisions of that court, but by the presence in the lower courts of men who had had this special training in the upper court.

It is of the utmost importance that these judges in the Court of Patent Appeals should be well paid. Otherwise they might not be willing to break up their homes and move to Washington for a limited term. We think that their salaries should be higher than those of the judges of any court in the United States except the United States Supreme Court.

The increased expense due to such a court would be small. The aggregate amount of work to be done by the Judges of the United States Courts as a whole would not be changed to any substantial extent, because all appeals must now be heard by the present courts and judges and, if there were a single Court of Patent Appeals, the Courts of Appeal in the nine circuits would be relieved of just as many appeals as were heard by it. The judges in some of the circuits are much overworked,

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but this is not true of many of the circuits. The Chief Justice of the United States Supreme Court, in selecting these judges, could, if he chose, take into account the work of the different circuits and whether one circuit or another could best spare a judge.

As the law now stands, judges from one circuit may be called upon, and not infrequently are called upon, to go into other circuits which are short-handed. In this way, any undue pressure upon the judges in any particular circuit, by reason of the loss of any single judge who went to the Court of Patent Appeals for six years, could be relieved.

Moreover, it is no hardship to increase the number of judges where necessary. The whole judicial system of the United States is said not to cost as much as it does to run one first-class battleship, and the addition of a few judges would be a negligible burden upon the Treasury.

A further advantage of a single Court of Patent Appeals would be that it would see clearly where there were defects in the statute and in the conditions and practice in the Patent Office, and could speak with authority on all matters which affect the theory and practical working of the patent system.

The Patent Office a Separate Institution, and Independent of the Department of the Interior.

The second proposal which your Committee recommends is that the Patent Office be made a separate institution, independent of the Interior or any other department.

The Patent Office was originally in the State Department, but, on the formation of the Interior Department in 1849, it was made a bureau of that department and has been so ever since.

The only matters connected with the Patent Office with which the Secretary of the Interior has anything to do are the following: The Secretary of the Interior must submit to Congress all estimates for appropriations. All appointments, excepting those of the Commissioner, two Assistant-Commissioners, and five Examiners-in-Chief, are made by the Secretary but only on the recommenda-

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tion of the Commissioner. The eight places named are Presidential appointments, but the Secretary makes recommendantions to the President. All matters of disbarment or reinstatement after disbarment of attorneys are passed upon finally by the Secretary. All matters of discipline are under the Secretary's jurisdiction. The Secretary of the Interior must approve all changes in the Rules of Practice of the Patent Office, but he cannot compel the Commissioner to make any change whatsoever.

No appeal lies to the Secretary from any decision of the Commissioner, either in matters of merit or practice. All such matters, as far as they are reviewable, rest with the courts of the District of Columbia.

The Secretary of the Interior no longer signs the patents, and has no jurisdiction to grant or refuse them.

Thus, it will be seen that the Secretary of the Interior is not required to know anything about patents or patent law. He is not selected because of any qualifications for the granting of patents or supervision over the Patent Office. The Secretary of the Interior has less influence over the Patent Office than over any other bureau of the Interior Department, because there are appeals to him from all the other bureaus. Nor is the Patent Office related to any other bureau of the Interior Department.

The Secretary of the Interior has recently moved out of the Patent Office building, thus severing physical contact with the Patent Office, which is but a type of the lack of mental contact between the office of the Secretary of the Interior and the Patent Office.

The experience of many Commissioners over a period of several generations has shown that, no matter how pleasant the personal relations may be, the Commissioner of Patents cannot expect any real benefit to the Patent Office to flow from its connections with the Interior Department. There is nothing in common between the interests of the Interior Department and those of the Patent Office, and, consequently, nothing to produce any advantage from the amalgamation of the Patent Office into the Interior Department.

Your Committee believe that to make the Patent Office an independent bureau would greatly increase the respect of the public and Congress and the courts for it,

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and would make it easier to procure enlarged appropriations and better salaries than under present conditions.

As to appropriations, under present conditions the demands of the Patent Office, for equipment, personnel and salaries are necessarily subjected to comparison both by the Secretary of the Interior and by Congress with those of several other unrelated bureaus, each pressing its own demands and criticising any apparent preference. In the opinion of your Committee, this operates as a severe handicap. In estimating the needs of the Patent Office, there should be no discussion of the demands, for example, of the Pension Office or the General Land Office. As an independent institution, the needs of the Patent Office would be judged on their necessity and the appropriations be determined by consideration of general policy.

As to personnel: The enhanced dignity and independence of the Patent Office would render all positions of importance in it more attractive, and particularly would make it easier to secure and retain in office men of the necessary qualifications to fill the difficult office of Commissioner.

A copy of a proposed bill for making the Patent Office an independent bureau is annexed to this report and its enactment is recommended by your Committee.

Increases in Force and Salaries of the Patent Office.

The third proposal which your Committee recommends is a substantial increase in the force and salaries of the Patent Office. The patents granted by the United States Patent Office are of less average probable validity than formerly, because the number of applications for patent and the field of search are constantly increasing, while the examining force for many years has been insufficiently large and has not been increased proportionately. The inducements are so unattractive that twenty-five per cent. of the examining force has resigned within the past three years. Your Committee finds that the Patent Office is suffering both from lack of examiners and from inadequate compensation.

The salaries of the Patent Office examiners have been increased only ten per cent. since they were fixed in 1848,

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when they were approximately the same as those of members of Congress. At the time the salaries of the Examiner-in-Chief were fixed, they were the same as those of Federal District Judges. During the past seventy years, the compensation for technical service in almost all other directions has been increased very largely. Congress, in creating new positions, is willing to pay technical men salaries more nearly approximating the usual compensation of such men in private service, but, having started a position at a given salary, is very loth to increase the salary. A Principal Examiner, to pass the entrance examination for the Patent Office, must himself have an education equivalent to that of a college graduate, and yet his salary is so low ($2700 a year) that it is practically impossible for him to give his own sons a college education.

Your Committee believes that salaries should be paid to the examiners proportionate to those paid for equally high technical work in other departments created recently; such, for example, as are paid in the Army and Navy and in the office of the Attorney General. The examiners are passing upon questions often involving millions of dollars, and they cannot be at their best in this vitally important work unless their salaries are large enough for them to live comfortably and without strain. The chances of making mistakes in the granting of patents are great enough even under the most favorable circumstances, and they should not be increased by compelling the examiners to work for inadequate salaries. The inducements should be such as to present compensation and a career which would attract and hold men of the highest ability. The payment of adequate salaries and the creation of provisions tending to hold out attractive prospects to the examiners would also tend to raise the dignity of the Patent Office and to increase its standing in the estimation of the public and of Congress and the courts, and so would tend to enhance the value to the public of the patent system.

The work of the Patent Office has grown so much more rapidly than has the examining force that the examination to determine whether or not the invention claimed in an application for patent is novel is imperatively restricted to the field of search where it is most likely that

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the invention will be found. Many patents are granted which would not be granted if the examiner had time to make a thorough search. One of the Assistant Commissioners of Patents is compelled to devote a large amount of his time to speeding the work of the examiners in order to prevent further falling behind in the number of unexamined cases. Money is often invested on the strength of patents, only to find later that the patent is upset in the courts, because the Patent Office search did not go far enough to discover that the invention had already been disclosed in some earlier patent or publication. The granting of a patent with invalid claim or claims which are too broad or which are nebulous is a menace to the art to which it relates, and until such a patent has been adjudicated and its effect judicially determined, it tends to prevent manufacturing and commerce in that art. Such a patent may, in this way, cost the public many millions of dollars besides the cost of establishing its invalidity or its true breadth or meaning by litigation, and the prevention of the granting of such patents by any reasonable increase in the examining force of the Patent Office would, in many cases, be a very large saving. The inducement to inventors and investors in patents is consequently lessened, the standing of patents before the courts and the public is impaired, and the production of inventions discouraged.

Your Committee accordingly recommends a substantial increase in the salaries of the Patent Office officials, and in the number and salaries of the examiners, as provided in the draft of the bill for that purpose which is attached hereto.

While your Committee believes the Patent Office so fully justifies its existence that it would be an exceedingly profitable investment, even though all expenses were paid from the public income, the Patent Office has always been self-supporting and the increase in salaries and examining force which the Committee recommends can easily be entirely taken care of by the Patent Office income, if necessary.

Compensation for Infringement of Patents.

While an injunction can ordinarily be obtained against an infringer in a case where a patent is adjudged valid,

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except where it would interfere with Government work, a money recovery has not heretofore been generally possible except under most favorable circumstances. In a case where it cannot be said that the entire salability of the article depends upon the invention, it has been necessary to show just how much of the price of the article is attributable to the invention, and as it is ordinarily impossible to make such a separation, and as most patent cases are ones in which it cannot be said that the whole salability of the article depended upon the invention, it has resulted that recovery of money is seldom obtained in a patent suit.

Recently there have been two or three decisions in which the courts have taken a more liberal attitude, holding in effect that where an invention has been used by an infringer a reasonable royalty may be awarded to the patentee based on a mere estimation or on opinion evidence, even though no exact computation can be made. This is analogous to the attitude of the courts in personal injury cases and is entirely just and reasonable. While, as stated, there have been two or three decisions to this effect, it may take a generation to induce United States courts generally to adopt this position, if at all, and the Committee therefore proposes that the law be amended to provide, that as damages to the complainant, the court, on due proceedings had, may adjudge and decree to the owner payment of a reasonable royalty or other form of general damages. Such an amendment has been provided in the attached bill amending Section 4921, the Revised Statutes of the United States, and reading as follows:

> **"If proof is not offered or, in the absence of adequate proof of the amount that should be awarded as damages or profits, the court, on due proceedings had, may adjudge and decree to the owner payment of a reasonable royalty or other form of general damages."**

This proposed amendment would enable the patentee in all suits where the patent has been found valid and infringed to recover at least a reasonable royalty, and would provide a money recovery in the great majority of patent suits where no recovery would otherwise be possible. The Committee believes that the comparative certainty of financial return would answer one of the

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most common and strongest reproaches against the patent system, namely,—that a patent does not ordinarily pay the inventor any money, and it believes that the incentive to invent would accordingly be greatly increased.

There are some cases in which it seems to many who are familiar with such matters as though the courts were inclined to go to the other extreme and award damages out of all proportion. Where a complainant has shown that profits have been made by the use of an article patented as an entirety, the infringer is liable for all the profits unless he can show,—and the burden of proof is on him to show—that a portion of them is a result of some other invention used by him. If the infringer cannot show what proportion of the profits is due to such other invention, then all his profits must go to the complainant. Any rule by which the entire profits are given to a patentee in the absence of proof that they are all due to the invention of the patent sued upon, is unfortunate and sometimes very unjust. The proposed amendment to the statue would permit a court under these circumstances to do substantial justice even though it could not be mathematically exact. In other words, the amendment to the statute would enable a court to avoid awarding either too much or too little.

Conclusion.

Your Committee, believing that the American Patent System is vitally useful in our system of Government, therefore recommends that the reforms herein discussed be enacted into law.

Your Committee also recommends that this report be approved by the National Research Council and that the Committee be continued for the purpose of arousing and coördinating interest in and support for the necessary legislation of various national societies, manufacturing interests, bar associations and other elements of the public.

Respectfully submitted,

(Signed)

(L. H. BAEKELAND) Acting Chairman
WILLIAM F. DURAND, Chairman (absent in France)
M. I. PUPIN
R. A. MILLIKAN

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S. W. STRATTON (see reservation below)
REID HUNT
FREDERICK P. FISH (see reservation below)
THOMAS EWING
EDWIN J. PRINDLE
Approved: except the separation of the Patent Office from the Interior Dept.,
JAMES T. NEWTON, Commissioner of Patents.

Reservation by Dr. Stratton.

I agree to the terms of the report with the exception of that portion which refers to the establishment of the Patent Office as a separate Government institution. It is not quite clear in my mind that this would be the best thing to do since in general it is best for all Government establishments to be represented in the Cabinet.

S. W. STRATTON.

Reservation by Mr. Fish.

I entirely concur in the substance of the conclusions set out in the above report.

I think, however, that the words "if proof is not offered, or" in that portion of proposed Section 4921 which deals with damages and profits, should be omitted so that the sentence in which those words appear should read:

> "In the absence of adequate proof of the amount that should be awarded as damages or profits the Court, on due proceedings had, may adjudge and decree to the owner payment of a reasonable royalty or other form of general damages."

I do not think that a statute should directly or indirectly contemplate a condition in litigation in which "proof is not offered." I believe that the clause which I suggest would accomplish the desired purpose and that the Courts in applying the clause would be embarrassed if the phrase "if proof is not offered" were in the statute.

I think also that general damages by way of a reasonable royalty or otherwise should not be awarded unless it appeared that actual damages or actual profits due to the unlawful use of the invention could not be determined and that there should not be any language in the Statute which implied that no effort be made to determine such actual damages and profits.

FREDERICK P. FISH.

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ON THE COST OF AN UNPATENTED ARTICLE BY VIRTUE OF ITS CONTACT WITH PATENTED MACHINES OR PROCESSES.

By DUDLEY T. FISHER, Columbus, Ohio.

The Editorial paragraph on page 151 of the December number of THE JOURNAL OF THE PATENT OFFICE SOCIETY raises two quite distinct questions both of which are extremely interesting. First, in its manufacture from raw material to the finished article, how many times is an unpatented article, such as a leather shoe, taxed by virtue of its contact with patented machines or processes; and second, is the price of such an article enhanced by virtue of such taxation. Starting at the ultimate raw material, that is, the living animal whose skin is used for manufacturing a shoe, the cotton plant from which the thread for stitching and linings are produced, the ore from which the steel nails and brass eyelets are derived, etc., it is well known that every step in the manufacture of a leather shoe is more or less directly taxed by contact with patented machines and processes. The ramifications of these processes by which the various materials are prepared before they are assembled by the shoemaker, and even the processes within the shoe factory itself, are so complicated that it would be almost an impossibility to trace, with any degree of accuracy, the exact amount which each tax levies upon a single pair of shoes. Only a casual glance at the subject, however, is necessary to see that there are thousands of taxes levied by patented machines and processes upon the material in its various stages of preparation and upon the parts of the shoe after they arrive at the shoe factory. When hastily viewed it seems only reasonable to suppose that the levying of such innumerable taxes upon the raw material and partly finished products should enormously enhance the price of the finished article.

While I have no data at hand to support my opinion, I believe that it is only reasonable to state that if contact with a patented machine raised the price of an un-

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Of the seventy-five examiners holding a permanent appointment who entered the military or naval service, a considerable number have already been discharged therefrom and others expect an early discharge. Present information indicates that four former examiners will not reenter the Office; the following have already been reinstated and are now at work, mostly in their old divisions:

C. F. Kraft,
K. R. Lesh,
W. J. Eccleston,
C. H. Biesterfeld,
H. F. Freeman,
W. W. Burns,
Jos. Kurz,
J. L. Fearing,
E. F. Dowell,
W. S. Brown,
G. C. Hyde,
J. S. Petrie,
S. Shappirio,
A. M. Pedersen,
M. R. White,
L. R. Grabill,
C. Crews,
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M. J. Salomon,
W. A. Strauch,
C. A. Norton.
M. W. McConkey,
L. A. Maxson,

We regret to record the sudden death of First Assistant Examiner Isaac H. Bryant of Division 32; he was struck by a car on the W., B. & A. Electric Ry. on the afternoon of Feb. 2 and instantly killed.

Mr. Bryant had been a member of the examining corps since Sept., 1898, rising through the grades to the position of first assistant examiner and holding his last position since Dec., 1907.

Thurston B. Miller, formerly a clerk in the Issue and Gazette Division and now with the army of occupation, has sent to the chief of that division, Mr. Mortimer, an interesting souvenir in the form of a leaflet copy in German of President Wilson's note of Oct. 23, 1918, concerning peace, guarantees and an armistice. The leaflets were printed, it is stated, by the German government and circulated among their soldiers. The one sent Mr. Mortimer was found in a captured German dugout near Stenay and a translation of the leaflet proves that the original text of the note was closely followed.

Lieutenant D. A. Howard, formerly of Division 21, is now at Camp Humphries. His first experience in the

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Army was gained at Camp Holabird, Maryland, where he conducted tests in rapid sand filtration on the new water trucks. Subsequently he was transferred to the Engineer Officers' Training Camp at Camp Humphries, Virginia, where he graduated on October first. He had reached a port of embarkation when the armistice was signed.

Major A. M. Holcombe, formerly an assistant examiner in the Patent Office, has been substituted by the War Department in place of Max Thelen as its representative on the Munitions Patent Board, of which ex-Commissioner Ewing is the president.

The firm of Kerr, Page, Cooper & Hayward announces the entry into their firm of Mr. Sturges S. Dunham. Mr. Dunham was formerly an assistant examiner and located in Division 30 and in the Classification Division.

FISHER & SMART ON PATENTS

CANADIAN PATENT LAW and PRACTICE

By HAROLD FISHER, B.A., LL. B., of the Ontario Bar, Ottawa, and RUSSEL S. SMART, B.A., M.E., of the Ontario and Quebec Bars, Ottawa

Appendix on Patent Office Practice

By WILLIAM J. LYNCH, I.S.O., Chief of the Canadian Patent Office

This book, published in 1914 with half calf binding at $7.50 in Canada and $8.50 in the United States, has met with a widespread sale, not only in Canada, but among the patent lawyers of the United States, whose clients have business in Canada. The work is the only modern text book on Patent Law in Canada, and is referred to as an authority in all patent suits (see Concrete Appliance Co. v. Rourke 8 W. W. R. 6; Bitulithic & Constructions Limited v. Canadian Mineral Rubber Co. 8 W. W. E. 207). Price $5.00 per copy.

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Publication of signed articles in this journal is not to be understood as an adoption by the Patent Office Society of the views expressed therein. The editors are glad to have pertinent articles submitted.

VOL. I. APRIL, 1919. No. 8.

EDITORIAL.

While it is perhaps a little early to forecast the amount of work likely to come into the Office this year, figures available at date of writing are thought interesting.

The receipt of cases in the year 1918 was unusually low, but for the first five months was substantially normal.

Receipt of new cases, exclusive of Trade-Marks, Designs, Labels and Reissues, from Jan. 1 to March 19, inclusive, may be tabulated for comparison as follows:

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	1918	1919	
January	4776	5009	
February	4826	5378	
To Mar. 19	3579	3635	
	13181	14022	Increase 841 cases.

Taking full receipts for March, 1918, and computing receipts for March, 1919, on the basis of the first 19 days, the table is

	1918	1919	
January	4776	5009	
February	4826	5378	
March	5900	5930	
	15502	16317	Increase 815 cases.

The most significant point in the above perhaps is the regular rise in receipts month by month this year. If this continues to the summer, and the receipts in the fall months are as heavy as customary for that time of year, the total receipts for the year should be equal to or above the normal, viz. 65,000 to 70,000. This would show a quick recovery of Patent Office business indicating a similar recovery in industry.

But it is confidently expected that these figures will be largely increased. While a few foreign applications are coming in, the full tide anticipated has not yet set in.

To handle the expected increase, no provision has been made by Congress; the current appropriations cover no numerical increase in the examining corps and as regards the clerical force, progress is made in the opposite direction. After July 1, the Office must dispense with ten lower grade clerks. It looks, then, as if the Office will be unusually undermanned the present year, a situation inventors and manufacturers, as well as Patent Officials, should seriously consider.

APPEALED CASES.

Of the patent and trade-mark cases adjudicated by the Court of Appeals of the District of Columbia, during the year 1918, the Commissioner's decision was affirmed in 38 cases; affirmed in part in one case; reversed in 16 cases; and 14 cases were dismissed.

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THE EXECUTIVE COMMITTEE'S LETTER TO THE NATIONAL RESEARCH COUNCIL.

(The following is an abridgment of the letter sent by the Executive Committee of the Patent Office Society to Dr. George E. Hale, Chairman of the National Research Council.)

The Patent Office Society at a recent meeting passed a resolution asking permission to lay before the National Research Council certain minor modifications in, and additions to, the recommendations in the Report of the Patent Committee to the National Research Council. The general aim of the Society is to lend all possible aid to your Committee. A brief statement of its conclusions follows.

Independence of the Patent Office.

The following motion was carried: That the Patent Office Society approve, and support by all proper means, both as an organization and as individuals, that National Research Council bill which provides for the establishment of the Patent Office as a separate institution independent of the Interior Department and of every other existing department of the Government.

Compensation for Infringement.

Although the proposed change in Section 4921 relates to a matter in which the examining corps of the Patent Office pretends to no special expertness, a judgment was expressed in favor of the omission from the section amended as proposed the words, "If proof is not offered or"—as advocated by Mr. Fish.

Court of Patent Appeals.

The Society approved of the establishment of a single court of patent appeals, but suggested that in place of the provision limiting the choice of judges to the circuit and district judges of the United States, the following be substituted: *Not less than three of the associate judges of the said court shall at all times be appointees from among the circuit and district judges of the United States.*

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Office Force and Salaries.

The Examining Corps and Officers.

The Society desires to make no specific recommendations respecting salaries for the examining corps. It earnestly invites attention, however, to the findings of the President's Commission on Economy and Efficiency in its Report of the Investigation of the United States Patent Office, December, 1912, (62d Cong., 3d Session, House Document No. 1110, page 129). This report, made at a time when the cost of living was much lower than at present, recommends $3600 for principal examiners,—$600 more than that proposed by the Patent Committee of the Research Council. Concerning the assistant examiners, the Society suggests that the salaries proposed by the Patent Committee if increased by the bonuses approved by the 65th Congress, 3d Session, are not more than adequate to accomplish to a minimum extent, the objects apparently held in view by the Patent Committee.

Auxiliary Force and Salaries Therefor.

Those having supervision of the clerical force of the Patent Office feel that the number of employees and the salaries of the different grades now provided by the appropriation are inadequate and not on a par with the salaries provided for other bureaus. Consequently, they feel it their duty to recommend that certain increases in pay and certain additional places be provided. With the contemplated increase in the number of employees of the examining corps the volume of work will be increased for the clerical force, and additional employees will be required.

The Patent Office clerical force has for many years been laboring under a disadvantage in having the entrance salary fixed $720 *per annum* for copyists and typists, so that efficient copyists and typists eligible for appointment and certified by the Civil Service Commission have declined acceptance in view of the fact that the other offices of the Government offer $900 to $1200 as an entrance salary.

The present appropriation provides only thirty-five places above $1200 and below assistant chief of division

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to which promotion may be made in the clerical force, causing stagnation of promotion, which causes discontent.

The following changes are therefore recommended:

Financial Clerk, from $2250 to $2500	an increase of	$ 250
Librarian, from $2000 to $2700	" "	700
Chiefs of Division, 8 instead of 6, from $2000 to $2500	" "	8,000
Assistant Chiefs, 8 instead of 3, from $1800 to $2100	" "	11,400
Translator, from $1800 to $2000	" "	200
Asst. Translator (additional) at $1600	" "	1,600
Private Secretary, from $1800 to $2000	" "	200
Clerks, Class 4, 22 instead of 9	" "	23,400
" " 3, 33 instead of 9	" "	38,400
" " 2, 100 instead of 17	" "	116,200
" " 1, 125 instead of 135	a decrease of	12,000
Clerks $1000, 100 instead of 91	an increase of	9,000
Draftsmen, 1 at $1800 and 3 at $1600 instead of 3 at $1200	" "	3,000
Draftsmen, 3 at $1400 instead of 4 at $1000	" "	200
Copyists at $900, 40 instead of 90	a decrease of	45,000
" $720, 40 eliminated entirely	" "	28,800
Messengers, no change.		
Asst. Messengers, no change.		
Laborers, 13 at $660 instead of $600	an increase of	780
Examiner's Aids, no change.		
Copy Pullers, 24 at $600 instead of $480	" "	2,880

making a net increase of $130,410 and 37 additional employees.

In conclusion action was taken by the Society as follows:

> *Whereas*, The Patent Office Society is keenly appreciative of the earnest work undertaken by the National Research Council in behalf of the patent system; of the time and effort thus far so generously expended; and of the great value of what has been already accomplished; now, therefore, be it resolved that the thanks of the Patent Office Society be, and the same are, hereby extended to the National Research Council.

FINANCIAL DEFICIT.

For the first time since 1861 the Patent Office has to report a deficit covering its business operations for the year 1918. The deficit of $73,419 was not caused, however, by any increase in expenditures, but by a falling off of receipts of $280,859. As a natural result of war conditions, applications for patents for inventions dropped from 67,590 in 1917, to 57,180 in 1918; patents issued dropped from 41,067 to 38,569.

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THE PATENT SITUATION IN ENEMY COUNTRIES.

Since the beginning of the war, the policy followed by Germany in respect to the patent rights of alien enemies, so far as can be learned, has been to issue restrictive orders only in retaliation for similar orders against her citizens. In accordance with this policy, Germany has been granting licenses to her citizens under American-owned patents. The power to grant these licenses has been vested in an official called the "Imperial Commissary," who has absolute discretion in the matter. He is authorized, but not required, to publish notices of the applications for licenses and to have full hearings of all parties concerned. The licenses granted have no fixed term of duration, but are subject to modification or cancellation at any time within the discretion of this official. It is reported that comparatively few such licenses have been granted under American-owned patents.

With respect to the situation in Austria and Hungary, it is reported that no licenses or other restrictions of American-owned industrial property rights have been issued, nor have any restrictions been issued against applications for patents by our citizens.

REQUIREMENTS FOR DIVISION.

A further extension of the present practice of reviewing with the examiner proposed requirements for division in doubtful cases, is desirable in order to avoid the delay caused by requirements made, but subsequently disapproved. This is now being done as far as possible and as far as the time of the law examiner in charge of division permits. The purpose steadily held in mind has been to make the practice uniform throughout the Office and to avoid annoyance to inventors by trivial requirements and danger to their real interests by requirements which might raise questions of double patenting. When distinct inventions are disclosed and claimed, capable of use apart from each other, the possibility of division arises and should always be enforced if the inventions relate to recognized branches of the art having different fields of search as evidenced by the Office classification or otherwise.

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SCOPE OF UNITED STATES PATENT-PROTECTION

BY GEORGE RAMSEY
of New York City.

The point from which a subject is viewed has much to do with the conception of the scope and attributes of the subject. The blind men of Indostan went to study the elephant. One grasped the trunk, "The elephant is very like a snake"; another encountered the elephant's leg, "The elephant is very like a tree"; the third, striking the elephant's broad side, said, "The elephant is very like a wall."

"And so these men of Indostan
Disputed loud and long,
Each in his opinion
Exceeding stiff and strong,
Though each was partly in the right
And all were in the wrong."

Patent property and the laws of the United States respecting patent property have come to be viewed from the narrow viewpoint of the specialist. As a narrow base cannot well support a wide, broad shaft, so there is a tendency of the patent system to be dwarfed and restricted through a narrow understanding of the subject.

A United States patent has been held by both eminent scholars and jurists to be a "contract" between the Government and the inventor, the Government offering a privilege and the inventor accepting the offer; the consideration on the part of the Government being the grant for a limited time of the right to exclude others from making, using, or selling the patented invention, and the consideration by the inventor being the full disclosure of a new and useful invention of a specified character. This contract theory of patents upon inventions originated in England, and is set forth in early English decisions. The judges of the United States Courts adopted the wording of those decisions and the word "contract" in this manner crept into the American jurisprudence and because there seems to have been no substantial analysis of the term, nor objection to it, the term has stuck.

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British Patents.

The early English laws gave substantially no protection to the inventor. He might avail himself of such authority as a master exercised over his apprentices; or he might use his powers to persuade his workmen to keep his secret for him. If a competitor discovered his secret by fair means or foul, the English Courts, at early Common Law, gave the inventor no redress. It was not until 1820 that the English Courts decided that one who obtained a trade secret by unfair means should be enjoined from using it.

Under these conditions, the growth of the arts was slow and almost entirely within the arts themselves. If some outsider—one who had not been regularly initiated into a craft by way of long apprenticeship—made an invention, he had neither the means of protecting his rights nor facilities for practicing his invention and therefore in most cases his discovery was lost. Where some bold craftsman broke away from the teachings of his master and made an invention, he either kept it to himself or disclosed it to his fellow workmen and it was then kept as a secret of the craft. This procedure retarded development.

The secret of soft porcelain was controlled by the famous Medici family and was so carefully guarded that when Francisco de Medici died in 1587, the secret died with him. Efforts were made all over Europe to rediscover the secret and it was almost a hundred years thereafter, namely, in 1673, when a Frenchman, Louis Peterat, was successful.

The British Sovereign had, as an attribute of the Crown, the right to issue exclusive grants, usually in the form of either "Literae Patentes," (letters open) or "Literae Clausae" (letters closed), the first being a type of grant under the seal of the Crown and being in the nature of a proclamation to the public directing attention to the privileges granted; the latter were usually commissions directed to an individual. Since the *Corpus Juris* afforded no protection to the inventor, he turned to the sovereign and sought protection under the royal prerogative of the monarch. This was sometimes done directly and sometimes indirectly through the offices of a favored courtier, preferably a patron of the arts and sciences.

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Patents upon inventions were usually "Literae Patentes" and in most cases the grants were both inclusive and exclusive, i. e., the patentee was granted the inclusive right to practice certain inventions in the realm and the public were excluded from practicing these same inventions under certain penalties of fines, imprisonments, seizures, etc. The transaction for obtaining these patents was really a contract, in that a proposition was presented to the sovereign by the inventor, or his patron, and the proposition was accepted or refused as the Crown saw fit. There was a meeting of the minds, and there was an agreement which included the payment of certain money considerations by the patentee, either yearly or at other stated periods; the consideration from the Crown being the grant of the inclusive and exclusive privileges. In these ancient patents, disclosure was not required; that is, the patentee was not required to disclose his invention to the public. He no doubt was required to satisfy the Crown that his invention was meritorious. (England today requires taxes under penalty of forfeiture of the patent. This is really but a continuation of the money consideration. The modern British patent also includes the provision that the patent shall be "revokable if the said patentee shall not supply or cause to be supplied for our (the King's) service all such articles of the said invention as may be required by the officers or commissioners administering any department of our service in such manner, at such times, and at and upon such reasonable prices and terms as shall be settled in manner for the time being by law provided.") In reference to this kind of a transaction, Lord Eldon, (Harmer vs. Plane—Chancery 1807) said, "Where the Crown on behalf of the public grants letters patent, the grantee, entering into a contract with the Crown, the benefit of which contract the public is to have," etc. This is the first use of the word "contract" in defining a patent.

The first record in history of a patent upon an invention is in 1316, when a petition was presented to Edward III for a patent upon the method of compounding the "philosopher's stone," that magic tablet which the owner might use to invoke good spirits to make wishes into realities. The King appointed a commission of three

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members to investigate. Upon the commission reporting that the invention was both new and useful, a patent was granted for a limited time.

Patent grants in England were not limited to inventions, but included monopolies upon many necessities of life, and such commodities of trade as the Monarch decided might bring profit to a favorite and to the Crown. Certain sovereigns, particularly Queen Elizabeth, utilized these sales of patent rights or "sales of monopolies" as a means of raising funds without direct taxation of the people. The wrath of the people, because of the increased costs, was directed against the patentee and not against the Crown, so that while the Crown shared in the profits, it attempted to, and for a time did, dodge the responsibility. Finally substantially all the commodities of life were controlled by these monopolistic grants and the burdens of the people became so great that a revolt was prevented by timely legislation. So in 1623, in the reign of James I, the parliament passed the Statute of Monopolies where it was declared that all monopolies granted by "Literae Patentes" or otherwise were odious and unlawful, with the exception of patents upon inventions and manufactures new in the realm, and specified that such patents might be granted to the inventor or introducer for a period of fourteen years. This prohibitive legislation is not a direct legislation in favor of patents or inventions, but merely makes such patents exceptions and is merely declarative of the Common Law as it has already been interpreted by the courts. The fact that such patents were specifically excepted when monopolies were being stricken down as odious and harmful shows that the legislators must have considered patents upon inventions of great merit. The patent laws of England today are founded upon this exception in the Statue of Monopolies.

In Queen Anne's reign (1702-1714) a statute was passed requiring patents to include a specification. This specification was required not so much as a consideration for the patent, but as a safeguard against fraud. The applicant was required in his specification to clearly set forth the invention and the patentee could not thereafter either restrict or enlarge the scope of his grant. All matters in the specification were held strictly against

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the patentee and many English patents have been held void and invalid because of some trifling error either in the mere wording of the statement of the invention or the title of the petition, on the ground that the grantee had not bargained fairly.

United States Patents.

The difficulties between the colonists and the mother country were over the question of rights, both civil and property. England refused to recognize rights which the colonists held to be inherent, and the colonies revolted. It may have been the reclaiming of the wilderness where man relied upon himself and in a certain sense went back to the primitive to make his livelihood and shelter with the labors of his own hands and muscles of his back, that led him to believe that that which he made was his own,—not by right of gift of some man-made king,—but by right inherent in Nature; or it may have been that broad-minded men found life under the monarchy restrictive and therefore turned to the New World to realize the freedom which their ideals and thoughts demanded. At any rate it is clear that these men were thoroughly convinced that each individual was endowed with certain "inalienable rights" in life, liberty and the pursuit of happiness; that the individual had the inherent right of protection to his property and to his person; that the lawful property he produced by his own hands from his own materials, or by his own mind labor, was his own; and that it was the duty of the State to afford him means to protect it.

The statesmen and lawyers of the colonists' days were well acquainted with the laws of the mother country and in many cases used the teachings of the laws of that country as guides, but in laying the corner-stones of the republic the "privileges" bestowed under the monarchy by the prerogative of the sovereign were now set forth as the "inherent rights" of the individual. With this in mind, the proceedings relating to protection for inventions in the Constitutional Convention are of interest. On August 18, 1789, Mr. James Madison, of Virginia, submitted a resolution to the Constitutional Convention that Congress "shall have power":—

"To *secure* to literary authors their copyrights for a limited time," Italics mine)

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"To encourage by premiums and provisions the advancement of useful knowledge and discoveries."

On the same day, Mr. Charles Pickney, of South Carolina, submitted the following resolution:

That Congress "shall have power":

"To grant patents for useful inventions,"

"To *secure* to authors exclusive rights for a certain time." (Italics mine)

In both cases these resolutions include the word "secure" relative to copyrights, that type of property which the Common Law of England already recognized. On September 5, 1787, David Brearly, of New Jersey, from the Committee of Detail, reported to the Convention the recommendation:

That the powers of Congress shall include the power to "promote the progress of science and useful arts, by securing, for limited times, to authors and inventors the exclusive right to their relative writings and discoveries." This recommendation was unanimously adopted without debate and was incorporated in the final draft of the Constitution. This is the first law in the history of the World which affirmatively recognizes property rights in the result of the type of mind work productive of inventions. It is notable that in this clause neither the word "patent" nor "grant" occurs.

It will be remembered that patents in England are granted by the Crown,—the Executive branch of the Government, which by royal prerogative could create "privileges." In the United States patents have their foundation under the Constitution in the powers of Congress,—the Legislative branch of the Government, that department of the Government which passes laws for the protection of existing "rights." In other words, in the United States the patent becomes an enabling instrument and not a creative instrument.

The official writings and statements of colonial days indicate that the words "*by securing*" were used advisedly as indicating the protection of a "right," not the mere granting of a "privilege." Madison, writing in the *Federalist*, states, "The copyright of authors has been solemnly adjudicated in Great Britain to be a right at Common Law. The right to useful inventions seems with equal reason to belong to the inventors."

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The Declaration of Independence states: "We hold these truths to be self-evident, that all men are created equal; that they are endowed by their Creator with certain inalienable rights. Among these are life, liberty, and the pursuit of happiness; that to *secure* these *rights* Governments are instituted among men * * *." (Italics mine)

The Preamble of the Constitution states, "We, the people of the United States, in order to form a more perfect union, establish justice, insure domestic tranquillity, provide for the common defense, promote the general welfare, and *secure* the blessings of liberty to ourselves and our posterity, do ordain and establish this Constitution for the United States of America." (Italics mine)

General Washington, in a letter dated September 17, 1787, submitting the Constitution to the American public stated:

> It is obviously impractical in the Federal Government of these States to *secure* all *rights* of independent sovereignty to each, and yet provide for the interest and safety of all. (Italics mine)

The word "*secure*" was used very frequently by Madison in his public writings and speeches, particularly in his debates in the first Congress, and in substantially all cases Madison uses the word "*secure*" in connection with the word "*rights.*" It therefore follows logically that when this clause in the Constitution is read it means just what it says, that is, Congress shall have power to *secure* to authors and inventors, their *rights* for limited times.

The spirit of the patent clause in the Constitution was clearly understood by the statesmen and law-makers of that early period. Mr. William V. Murray, of Maryland, on Wednesday, January 30, 1793, speaking for the patent bill then pending before the House of Representatives in his debate said:

> * * * The law ought to facilitate the granting of patents; and, as the right of exclusive enjoyment, at least for a limited term, was inherent in all equally, in every part of the nation, so all should, as far as possible, have facility in making their pretensions known and effectual. A country in Europe (Great Britain) had afforded, it was true, much experience on

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> the subject; but regulations adopted there would not exactly comport in all respects either with the situation of this country, or with the rights of the citizens here. The minds of some members had taken a wrong direction, he conceived, from the view in which they had taken up the subject under its analogy with the doctrine of patents in England. There is this strong feature which distinguishes that doctrine in that country from the principles on which we must settle it in this. These patents are derived from the grace of the Monarch, and the exclusive enjoyments of the profits of a discovery is not so much a right inherent as it is a privilege bestowed and an emanation of prerogative. Here, on the contrary, the citizen has a *right* in the inventions he may make, and considers the law but as the mode by which he is to enjoy their fruits. **** He thought it was of consequence that no invention, however small, or irrelative it might at first appear, should be lost; and, where he saw the idea of a patent ridiculed by some, and unattended to by others, he believed they were accustomed to take things in their appearances, and had not exerted their reflection. A little reflection should teach us that whatever is great and astonishing in the works of art was humble in its origin, had been opposed by ignorance or cramped by poverty, and had become important but by gradual accumulation and a very slow progression; and that the wisdom of Government should be exerted in forming a repository, where nothing that might eventually be of service should be suffered to perish. * * * *

As above pointed out, the rights of an inventor to his invention at Common Law were his just as long as he could control them and that was just as long as he could keep his secret or prevail upon his workmen to keep it for him. His rights were far from "secure";—they were very *insecure.*

The rights of a citizen of the United States and the rights of a subject of a king of England to their respective inventions are today substantially the same where the invention is practiced in secret; i. e., they are relatively unsecured against anything but theft and fraud; but there is a great difference in the laws of these countries for "securing" these rights. In the United States, Congress is empowered to provide laws for "securing" rights to inventions and the inventor has the same inherent right to demand a patent on his patentable inventions that he has to demand and invoke the protection of the law for any other inherent right. In England an inventor today makes a bargain with the Crown and obtains a patent from his king as a favor under the exercise of the royal prerogative. The legality of such British patent rests on an exception in the general law that struck down the abuses of this same royal prerogative

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which the inventor must invoke to secure his favor. In the United States (providing his patent will promote the progress of science and useful arts, and comes within the requirements of patent laws) he may *demand* his patent and while the form of his application is that of a petition, he does not present it as a beggar,—an object of charitable reward by a paternally disposed Government. He comes to have his invention clothed in that "security" which the law clearly sets forth to be his "right." The result of the proceeding which clothes his invention in this legal armor against piracy is not a contract, it is not a meeting of the minds, it is not a bargain comprising the offer of a disclosure and the holding out of a grant.

The proceedings leading to the grant of a patent, are an investigation, of necessity requiring disclosure, to determine what has been invented and whether the inventor has complied with the law of the land. He must disclose fully and fairly in order that the investigation may be full and fair. When his invention has been defined, its dimensions in the art measured, and no legal barrier is found, the patent is his by legal as well as inherent right. In order that the world may know just what has been found to be the boundaries of his "secured" property, the instrument evidencing the grant sets forth the precisely defined limits, that is, it defines what the Government is willing to concede and seal as being the invention he is entitled to "claim," i. e., control. When an inventor has complied with the laws provided, the Government is no longer a free agent,—the patent must issue. As the elephant has some of the characteristics defined by the blind men, so a United States patent has some of the attributes of a contract, but to so define a United States patent is to overlook the foundation upon which our patent system stands.

A United States patent therefore is an investiture, securing for a limited time, to one complying with the laws provided, the right to exclude others by due process of law from making, selling, or using a specified invention within the United States and territories thereof, and is evidenced by an instrument under Government seal defining the metes and bounds of the invention as determined by a governmental survey.

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INVENTION.

Probably one of the most difficult questions that the members of the profession—whether in or out of the Patent Office—are called upon to deal with is this question of what constitutes invention, how is its presence determined, and how can it be measured. It confronts one continuously, and I presume that more study has been had of this question than upon any other which comes before the members of the profession. And yet when we look about us we find that it is as much of a "will-of-the-wisp" to us as it has been throughout the many years in which our patent system has been in service.

There appear to be almost as many view-points as there are practitioners and people called on to deal with the subject. Each attorney and examiner seems to have his individual ideas on it. The judges of the courts called on to deal with patent cases have their individual views, and our text-book "sharps"—taking the cue from the latter apparently—more or less side-step the question, simply pointing out various instances showing different ways in which it has been interpreted. So that at the present time it is possible to obtain so many varied views and diverse opinions as to what the answer may be, that it is practically a matter of guess-work to determine in advance the possible decision that might be made in any case where the question is involved; one man's guess is as good as another's and it is probably because of this that the matter is left to the decision of a court through the medium of a law-suit.

Being of a retiring nature I don't like to intrude, but for the purpose of starting an interesting discussion I am presenting this article with a view to submitting a formula of my own as a subject for discussion. It is based on a series of factors which I have personally employed for a number of years when called on to test the questions of invention; I have used them in the preparation and prosecution of applications, determining questions of validity, etc., and in experting suits, and, so far as I remember, the factors have never failed me. I had never attempted to incorporate them into a formula—never having any need for its use—but in a recent matter

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the contrast between what seems to be the general trend of thought in the matter and these simple factors was so clear that I thought it advisable to make the direct contrast and to do this I hurriedly sketched a formula of these factors. I tried to frame one which would fit the opposite side of the question, but when I came to study the wide divergence in view-points it seemed impossible to produce a frame-work that would support the different factors which have heretofore been employed.

The particular wording of the formula as used is included in the following—I have extended it slightly for the purpose of the present paper. The formula proposed —subject to revision in the light of the discussion which this paper is designed to bring about—is as follows:

> INVENTION consists, fundamentally, in the isolation and solution of problems. The *presence* of invention is made evident by the failure of the prior art to present the complete solution of the totality of problems involved. The *measure* of the invention is provided by the character and extent of the problems and the manner of solution.
>
> Isolation of the problems is a prerequisite to the formulation of the solution or solutions. If the art carries no suggestion of the problems, it carries no solution, and the invention is of basic scope. If it carries a partial solution, the missing problems must be isolated from those solved by the known solution antecedent to development of a solution; and, basically, such solution must deal with both the known and the isolated problems in their relations one to the other, rather than individually.
>
> If the art fails to suggest any solution—even broadly—of the problems solved, the invention is of basic scope.

As will be understood, the test of invention is made on the basis of the problems solved rather than on the means employed in the solution.

Personally, I have for years considered that tests of invention should be made on the basis of the solution of problems, since it is evident that in any invention the inventor must first have a more or less definite idea of the final end to be accomplished, and in reaching the final solution must have followed—knowingly or unknowingly—the course pointed out in the formula basis. It is possible for the attorney, through analysis, to develop the particular problems solved, by examination of the complete invention, and when this is done thoroughly I have found that the problems which form the real test in the comparison with the art can be readily isolated,

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using the solution as the guide in the isolating analysis.

Where the solution itself forms the guiding test one inevitably finds that what seems to be the logical course of development of an invention is reversed. We say that "there is no invention in adding this to that" or "in substituting that for the other"—we are thinking and speaking in terms of the physical means of the solution. Each time I hear or read a statement of this kind I am reminded of a general example I have used personally in attempting to demonstrate the mental processes of an inventor who would logically follow the course which such statements seem to provide:

A (the inventor) happened to have a lot of loose elements at hand and which were not being put to use; they may have been a number of gears, shafts, cams, levers, etc.—possibly a unitary mechanism or two—a frame, etc. He does not like to see them idle, so he starts in to assemble them in various ways—much on the order of solving one of our old-time cut-up-picture puzzles. He finally gets a certain small combination which seems to be a good mechanical movement, so he continues adding to the combination, putting a part here, shifting the position of another, making substitutions, etc., until finally he builds up a large machine in which the parts seem to work in synchronism, etc., and *then* finds he has produced a machine capable of operation as a work-performing apparatus in a certain art, thus completing the invention through finding a use to which the combination can be put, the invention being made up of certain combinations of parts which he laboriously assembled to see if they could be put to some useful purpose.

Of course, this is a fanciful statement, for we all know that no inventor did or ever could work on any such basis. And yet when we try to analyze the generally accepted view-point as to the meaning of "invention," we find that this fanciful statement is really expressive of the assumed mental processes. When we attempt, under present conditions, to shift from this general viewpoint and rest an individual case on the basis of the solution of problems—and attempt to protect the invention on such basis—we are confronted by the fact that the determining factor considered is the particular element or elements specified in the claim and *not the func-*

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tion which that element performs—we find that the claim is considered functional. It seems to me that this condition is due to the erroneous attempt to base the question of "invention" on the specific means of the solution instead of on the inherently correct basis of the problems solved.

Of course I have had my troubles in using these factors in the presence of the prevailing opposite thought. And in presenting the matter for discussion I may be trying to ease my own pathway through the sea of troubles of a practitioner, but I would be greatly interested in reading the view-points of others as to the use of a formula of this type.

HORACE G. SEITZ.

New York City,
March 1, 1919.

CLASSIFICATION OF PATENTS.

During the past year the Office has been following a new plan in the reclassification of patents. Heretofore it was the custom for the revision to be carried on by a group of assistant examiners under the direct supervision of an examiner of classification; by the present plan the work is being done in the examining divisions. Each principal examiner, with the aid of his assistant examiners, is required to revise the classes of his own division, with the patents of which he is presumed to be familiar, the work of all divisions being under the general supervision of the Examiner of Classification. This plan has resulted in greatly expediting the work, and but for lack of clerical force it is believed the reclassification of domestic patents could be completed in two more years. During the past year, over 125,000 patents have been reclassified. There remain, roughly, half a million patents yet to be reclassified.

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INTERNATIONAL TRADE-MARKS—THE PRESENT AND THE FUTURE.

By LAWRENCE LANGNER,

Member of Patents and Trade-Marks Committee of the American Manufacturers Export Association.

(Excerpts from an address delivered at the Annual Convention of the American Manufacturers Export Association, New York, October 30-31, 1918.)

The dangers to which an exporter is exposed, if he does not register his trade-mark in foreign countries, are now generally recognized in this country. Only recently, our Department of Commerce issued a report to the effect that the registration of trade-marks in the various foreign countries may be regarded as one of the fundamental steps of preparation for trade after the war; that foreign trade-mark registration is perhaps of even greater importance now than under normal conditions, in view of the reported activity of enemy agents and others in appropriating American trade-marks; and that any article worth advertising abroad is worth protecting by means of trade-mark registration.

I understand that the International High Commission and State Department are now making a special investigation of the international trade-mark situation with a view to ascertaining what remedy, if any, is possible to alleviate these unfair conditions in regard to international trade-mark protection to which I have referred.

I think it is apparent to all of us that we are at the door of a new era in export conditions—the export trade of the United States, the development of the last five years—is going to be put to the test. In these times, all of us have to venture on prophecy, and for this reason I shall deal first with the situation as it is today, and I will then venture to put before you an outline of those policies which, if followed by our Government in the wonderful opportunities for international coöperation now afforded, will procure fairer dealings for our traders in the various foreign countries.

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So prevalent has the appropriation of trade-marks become in the Argentine Republic, that attorneys who make a practice of representing domestic concerns in the Argentine, such as firms of importers, have actually evolved an ethical reason for appropriating the trade-marks of American manufacturers. This ethical reason is that if the Argentine concern representing the American concern does not steal the trade-mark, it will be stolen by some one else. These ethics are preposterous from the standpoint of the American manufacturer, and yet from the standpoint of the Argentine importer, it is better for the American to have his mark stolen by a friend, than by some less disinterested party. Experience has shown that when these "friends" have been requested to assign the Argentine marks to the American concern, excuses are made which lead us to believe that, after all, our Argentine friends wished to have a hold on us which would forever preclude us from dealing with any other concern in the Argentine in goods bearing the trade-mark in question. Under these circumstances, unfair as the expense seems to be in the case where the possibility of doing business has not been tested out, yet it appears to be necessary to lay down the rule that no dealings should be had with parties in the Latin American countries until the trade-mark application has actually been filed in the Trade-Marks Office. Any exporter who fails to take this precaution cannot complain that he has not been adequately warned. For the past two years a great deal has been written on this subject and circulated throughout the country, and even the most conservative of our manufacturers, who have thought that where ignorance is bliss 'tis folly to be wise, have awakened to the realization that their ignorance and blissfulness has cost them their trade-mark rights in countries in which they might otherwise have built up a successful business. Nor does the loss of a trade-mark, pirated in this way in a country such as Argentina, extend only to the country in which it is pirated. A great many of the advertising periodicals are circulated throughout all of the countries of Latin America, and it is not an easy matter to use one trade-mark in business in one Latin American country, and an entirely different trade-mark in another Lat-

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in American country, since it precludes advertising the articles by a single advertisement in the international periodicals. Moreover, it is not usually convenient for manufacturers in this country to use different labels and trade-marks on the different goods according as they are shipped to one country or another, as confusion inevitably results from this course. In many instances, the trade-mark itself is actually cast on the goods in the process of manufacture, and in one case I remember that where a mark had been appropriated in Cuba, in connection with a well-known cash register, it became necessary to make special plates for such cash registers as were manufactured in this country and shipped to Cuba. These are merely inconveniences, serious enough, and after all, it is possible to overcome them, but the loss of the good will in a valuable trade-mark, upon which millions of dollars have been spent in international advertising, is a far more serious consideration, and no amount of inconvenience will compensate for this loss.

Many manufacturers are alive to the simple fact that industrial property, such as trade-marks and patents, represent the insurance policy on the good will of their business. The fees which are paid for trade-mark registrations represent the premiums which are paid on the insurance policy. Just as no up-to-date machinery manufacturer can afford to be without a development department, unless he is willing to be outstripped by his competitors, and must, therefore, install such a department and protect the inventions developed by him under the Patent Laws of this and other countries, thereby insuring the capital invested in his business—so by registering trade-marks in the various foreign countries, the exporter thereby insures the good will of his business and the money and effort which he has spent in advertising his goods and developing his trade in those countries. I have made an estimate of the costs in annual payments of insuring the good will of an export business, no matter whether it be great or small, whether it be a one hundred thousand dollar corporation or a ten million dollar corporation, and I find that the average cost per annum of insurance by trade-mark registrations in the Latin American countries amounts to less than $5.00 per country *per annum*. No doubt all of you have seen, in

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the prospectuses of corporations, items such as "good will and trade-marks" estimated at many millions of dollars. Taking the figure of $5.00 *per annum* per country as the cost of insurance of the good will of a business, it does not seem to me that this cost is inordinately high as compared with the cost of insurance of other forms of property which are not nearly so liable to be stolen or appropriated as trade-mark property.

It is not generally known that in Austria, Bulgaria, Cuba, Denmark, Finland, Germany, Greece, Guatemala, Haiti, Honduras, Hungary, Norway, Panama, Portugal, Russia, Servia, Spain, Sweden, Switzerland and other countries, it is absolutely impossible for an American exporter to register his trade-mark unless he has already registered it in the United States Patent Office. Registration of a trade-mark in the United States Patent Office is the door through which we must pass in order that we may register our trade-mark in the countries which I have just mentioned. One of the reasons why many of us are unable to register our trade-marks in such foreign countries is because that door is closed to us. Someone has remarked that the function of the United States Patent Office is to prevent the registration of trade-marks. It cannot be said that its practice is in entire alignment with the domestic business interests of this country nor does it in any way assist us in our international trade-mark difficulties. This cannot be blamed upon the Patent Office. The Patent Office is merely an instrument to carry out the laws in this country, and is itself hampered in adopting a broader-minded attitude by the Court of Appeals of the District of Columbia, a body which seems to be completely out of touch with the commercial activities of this country, and yet is in a position to review the practice of the Patent Office and to impose conditions for the registration of marks which make it almost impossible to secure the registration of certain popular types of trade-marks in this country. In particular, I have reference to the practice of mutilating marks which now forms a new instrument for preventing the proper registration of trade-marks in this country, as a result of a recent decision of the Court of Appeals of the District of Columbia. Under the practice resulting from this decision, every part

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of the mark which is not the exclusive property of the owner, whether it be his name, or a picture, or some kind of device for which he does not attempt to claim exclusive monopoly, must be removed from the drawing, so that the owner of the trade-mark ultimately succeeds in securing the registration, not of his trade-mark, but of particles of it. He then has to register these particles in the various foreign countries, and to rely upon these particles for the protection of his good will. (I understand that the Commissioner of Patents has recently modified this practice.) In my opinion, one of the most important questions before this Convention, so far as trade-marks are concerned, is the bringing of our domestic trade-mark situation into line with our export needs to such an extent that our system does not hamper us from securing trade-mark protection abroad. The fact that the larger proportion of trade-marks used in this country are not registered in Washington is a clear indication that registration in Washington is a luxury rather than a necessity. It is an expensive luxury in so far as the inability to secure such registration prevents us from securing trade-mark registration in many foreign countries. I have in mind, in particular, the question of Cuba, where American traders are absolutely debarred from securing Cuban trade-mark protection, whenever the trade-mark does not fit in with the minute requirements of the gentlemen in Washington. In particular, our domestic situation will prevent many of us from obtaining the full benefits of the Pan-American Trade-Marks Union when this Union comes into operation.

The Pan-American Convention is an ambiguous document, permitting of various interpretations, but it is clear that whatever the rights may be which are granted to American traders under same, they are obtained only if the American trader is able to register his trademark in the United States Patent Office. Here again, the United States Patent Office is the door through which we must pass before we can secure the benefits of this Union, when it comes into full force and effect.

I have sometimes thought that the question we are up against today is whether we shall attempt to change our own laws, or attempt to change the laws of the rest of

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the world. I believe that our domestic law should be changed, not only in order to give full effect to the Pan-American Union, but also to permit the registration of well-known trade-marks in this country which do not measure up to the standards and conditions now prescribed by the United States Patent Office, so that any trade-mark which has been well established in commerce in this country can be registered. When the present trade-mark law came into effect in the year 1905, it contained a clause to the effect that any mark which had been used in commerce for ten years prior to that date could be registered in the United States Patent Office. Many such marks have been registered under the provisions of this clause, known as the Ten Year Clause, and so far as I am aware, it has never caused the slightest amount of inconvenience. Perhaps an immediate step to alleviate our difficulties would be the extension of this ten year clause, so that any mark which had been in use in this country for a certain period of time before the filing of the mark, could be registered at Washington without having to measure up with the minute and detailed requirements of the United States Patent Office.

We must also bear in mind that we always require a foreigner who tries to register his mark in this country, to produce a certificate showing that his mark has been registered in his own country. This is often very unfair to the foreigner, because British merchants very often fail to register their trade-marks in the British Patent Office for the same reason that Americans fail to register their trade-marks in Washington, namely, because the value of such trade-mark registration is limited so far as the British field is concerned. When the Britisher tries to register his trade-mark in this country in such circumstances, he is unable to do so. Nor must it be assumed that our own laws are such that no piracy can be committed. I have run across cases where a well-known trade-mark used on the Continent was stolen by an American concern which simply proceeded to use the trade-mark in this country before the foreign concern established business connections over here, and thus obtained possession of the mark and registered it. Under the laws of this country, such a practice is not only possible, but is perfectly legal, so long as no fraud takes place.

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If our own trade-mark laws are not amended to permit of easier registration, then we should surely make reciprocal arrangements, by treaties or otherwise, with countries such as Cuba, in order to enable us to register our trade-marks in Cuba without showing that the mark has been registered in the United States Patent Office. It ought to be sufficient, in my opinion, for any American trader who can produce documentary evidence to show that he has a manufacturing establishment in the United States, and has used his trade-mark in this country, to register his trade-mark in any foreign country without having to show that the mark has been registered in the United States Patent Office. If the State Department is actively interesting itself in endeavoring to eliminate the piracy of trade-marks, this particular question is one of considerable importance, and should be given consideration without delay.

It is also urgently necessary, for the development of our export trade, and in order to give full effect to the Webb Act permitting the combination of concerns in this country for export trade, and to assist concerns that are handling a great number of different classes of merchandise, to permit them to register their trade-mark in this country by a single registration in the United States Patent Office covering all classes of goods, as is possible under the Canadian law. This would enable such concerns to secure registration in a number of foreign countries by the filing of a single trade-mark application, and the payment of a single fee in each country, whereas at the present time they are sometimes required to file as many applications as there are applications in the United States Patent Office.

The United States trade-mark practice, as at present conducted, requires the naming of the actual goods registered, and the registration is strictly limited to the goods on which the mark has been used. As a result, it is often impossible to cover a number of goods of the same class by one certificate of registration, especially if the manufacturer in this country gradually keeps adding to his line of goods in the course of the development of his business. In such circumstances he has to keep multiplying his trade-mark registration in the United States Patent Office, thereby often necessitating his mul-

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tiplying the registrations in the various foreign countries. In most foreign countries, a trader is permitted to register his trade-mark in an entire class of goods, even though he may only be using it on certain of the goods. This practice of the United States Patent Office, calling for the multiplying of registrations, also impedes the registration of trade-marks in foreign countries, and particularly in connection with the trade-marks of associations for export trade, where a large number of different classes of goods are involved.

The British Law also provides for the registration of association trade-marks, where a number of manufacturers form an association employing a common mark, and an amendment of our law permitting such registrations in this country would be of value both to the domestic situation, and to the foreign situation.

International action must be taken to stamp our trade-mark piracy. I believe we should urge the proposal that a treaty be negotiated with foreign countries throughout the world whereby valid registration of a trade-mark shall not be granted in any of the signatory countries where the trade-mark is already the well-known property, either by registration or by use, of a concern located in another signatory country. An International Trade-marks Union establishing this high moral principle would go a long way to solve the problems of international trade-mark protection.

FOREIGN PATENTS AVAILABLE IN A NEW ARRANGEMENT.

The work of binding the published patents of Austria, Denmark, France, Norway, Sweden, and Switzerland in classified order is about complete and it is expected that they will be soon available to the public. The German patents which have been available in this form for some time have proved to be of inestimable value in patent research.

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EXAMINERS' SALARIES.

BY WM. I. WYMAN.

One of the most serious situations that confronts the Office is the constant disruption of its technical corps occasioned by the continuous flow of resignations proceeding from the junior grades. The corps as a whole is in a permanent state of disturbance, with its ambitious members separating themselves therefrom as soon as they receive the necessary amount of training, and with newcomers arriving, expecting in most cases to benefit by the same procedure. It must be evident at once that this process of separating a man from his work as soon as he knows it to provide a place for a beginner to learn it all over again is one highly disorganizing to the patent system and one productive of highly injurious results to the public. The Patent Office can not remain an organization to determine property rights and an eleemosynary institution to train patent attorneys at the same time and continue such existence. It can not continue to be half Patent Office and half school and live most effectively.

The remedies proposed have been in every case an increase in salary in the highest grades with proportionate increases for every grade above that of fourth assistant examiners. But these proposed remedies do not strike at the root of the problem. Comparatively few first assistant examiners resign (most of those leaving the Office being from the grades of second and third assistant examiners), while much fewer separations take place from the grades of primary examiners and above. With the salaries of seconds increased to equal or exceed the present salaries of firsts and primaries, the resignations from the former grade will tend to diminish, with consequent reduction of opportunity for promotion from the two lowest grades and therefore with constant pressure to separate from the service. The situation is so serious that it is thought evident that any proposed solution which appears to offer a fairly adequate remedy should be welcomed and earnestly considered. It is from that point of view that the writer makes his pro-

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posal, which is based upon a study of every factor thus considered, and the contribution is offered with the hope that a solution of this puzzling problem may be advanced, or at least that discussion may be evoked which may lead to such a solution.

The proposal which follows distinctly avoids the objections of the situation now existing and the remedies hitherto suggested, by permitting every capable man to receive an adequate compensation, comparable to the awards given for like service in private practice, within a few years after his entrance into the corps and upon a showing of the necessary equipment and experience. Thus the inducement to separate from the service by the pressure of disproportionately great differences in salaries paid in and out of the Office for the same work becomes in substantial measure obviated.

Salaries should be graded in view of similar positions in private practice, in view of the responsibilities, training and character of the work of the employee, and with a view of rapid attainment to standard and sufficient compensation. Assistant examiners have in recent years resigned to accept positions in private practice at initial salaries ranging from $3000 to $3600, with annual incomes in sight of from $4000 to $5000. It is thought therefore that every assistant examiner should after several years experience in the Office and upon proof of capacity, energy and faithfulness, be assured of a salary of $3000. It is considered a logical compensation both with respect to the initial salaries offered by private employers and as a standard salary to which every highly trained, experienced man has a legitimate right to aspire.

On the basis of income received by the private practitioner of equal experience, knowledge, judgment and responsibility, it is thought that the salary of the primary examiner, very conservatively estimated, should be placed at $4000. The primary examiner's salary was not raised substantially when the compensation of the corps as a whole was advanced in 1908, and his compensation, if it were increased to $3000, as some propose, or even $3600, with the present lowered purchasing power of the dollar, would not be equivalant to the old salary of $2500 received before that date.

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It is accordingly proposed that there be created two first assistant examiners for each division of the Office who should receive $3600.

The proposition in brief is as follows:

Assistant examiners: entrance salary	$1500
annual increase of 300 to a maximum of	3000
which should be received by every assistant in course of a limited time upon proper proofs of capacity.	
First assistant examiners: (two to a Division) to be selected by strict test and scrutiny of record, and who should have the qualifications of a primary examiner..	3600
Primary examiners: to be selected from the corps of first assistants	4000

This arrangement provides for three grades, whose duties and responsibilities are distinct: primary, first assistant, and assistant examiners. The knowledge that every assistant within a reasonable time will obtain a salary of $3000 will tend strongly to retain most of the men who now resign to enter private practice. The fact that every man showing unusual capacity and energy is eligible for the $3600 and $4000 grades will be a strong inducement to those of such calibre to stay in the service, and thus prevent the state of flux of the personnel and preserve its quality.

It is thought that this scheme has the merit of simplicity, and is logical and satisfying. It is just to the public, as the salaries proposed are based on private standards; it is equitable to the employees, as their proper aspirations are in fair measure met and rapidity of promotion reasonably assured; and it is good policy for the Office, as proper morale, quality and tendency to permanency are also reasonably well assured.

A qualifying proposal, based upon the same scheme, less just but perhaps more likely to receive a favorable hearing, is submitted as follows:

(a)	**Assistant examiners,** $1600, advancing every year by $200 increments until the maximum is reached of	$2800
(b)	**First assistant examiners**	3200
(c)	**Primary examiners**	3600

Under the first plan, the assistants would normally reach the maximum compensation in 5 years, while under the second, it would be attained in 6 years.

The theory upon which both of these plans is based is

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that after a member of the examining corps has had a certain amount of Office experience and is doing effective and responsible work, he should receive the maximum salary of his grade, which should be adequate and correspond to the market value of similar effort; that such salary should be attained with surety and reasonable expedition; that the different grades be representative of distinctly different duties and responsibilities; and finally, that the salaries should correspond in some measure at least to the importance and dignity of the grade to which it is attached.

LEGISLATION.

The following bills were introduced in both houses of Congress during the last session.

First. Authorizing the Federal Trade Commission to accept and administer for the benefit of the public, patents the proceeds from which may be used as a fund to encourage scientific research, etc.

Second. An act amending Chapter 143 of the act of March 3, 1883, providing for granting to persons without payment of fees patents for inventions that are useful in the public service, when the applicants will stipulate that the inventions may be used without payment of royalty by the Government or any one contracting with the Government of the United States.

Third. To allow inventors to prove the date of their inventions in a foreign country and to get the benefit of the same in interference proceedings.

Fourth. An act to extend temporarily the time for filing an application by a citizen of an ally country that grants similar privileges to our citizens, from twelve to twenty-one months after the application for the same invention has been filed in a foreign country.

Fifth. An act to give effect to the provisions of the Buenos Aires Convention of August 10, 1910, for the registration of trade-marks, the trade-mark bureau in Havana having been established under the provisions of that Convention.

These bills had all been favorably reported and several had passed one or the other House of Congress.

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PROBLEMS OF THE PATENT OFFICE—A SOLUTION.

BY ELONZO T. MORGAN, Second Assistant Examiner.

The reason for the public policy of granting patents is to encourage inventors to disclose their inventions to the public view that society may be benefited thereby. It is stating the obvious to say that our great advancement in industrial development in this country in the last twenty-five years has been due very largely to inventions of labor-saving devices and processes which have enabled a few men to do the work of multitudes. Every person who has a new method or mechanism which he thinks would be of value commercially is encouraged by the prospect of reward to submit his solution of a problem to the Patent Office and try for patent protection therefor. The result is that new and useful inventions after a brief period of personal monopoly sufficient to suitably reward the inventor for his disclosure, become free contributions to the sum of public knowledge. By this process the most economical methods of production and distribution are made available to mankind. Workers are more and more thereby changed from mere drudges to skilled workmen, enabling each worker to accomplish infinitely more, and to earn more in shorter time and thereby reserve to the individual members of society more time for personal education, recreation and enjoyment, more money with which to pay for these things and the ultimate higher civilization and enlightenment of mankind.

Having concluded that it is enlightened public policy to encourage the practice of taking out patents for inventions, it is vitally important to provide a Patent Office for the examination of applications and the allowance of patents that will function as efficiently and promptly as possible. That the Patent Office is not functioning as promptly and efficiently as it should will be admitted, I believe, by most people who are familiar with the present conditions.

The problem confronting the management of the Office is two fold, consisting of a lack of a sufficient force of examiners and a lack of sufficient funds with which to

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procure prompt, efficient and adequate public service. As to funds, the existing public policy is to require the applicants for patents to pay for the carrying on of this branch of the public service by charging them fees for the examination of their applications and the allowance of their patents, so that this service is not conducted at the public expense. It is believed that as a body the inventors and business men of this country are entirely willing to bear this incidental expense to any amount found necessary or desirable to furnish them with the most efficient service, yet with all this acknowledged public benefit and the available means to defray the reasonable expenses thereof eliminated from the public tax, it seems impossible to modernize the Patent Office. For some unknown reason Congress does not see fit to authorize the necessary expenditure that the business world would, I believe, gladly make if it were merely asked or permitted. The usual retort about voting an increased public expenditure for the benefit of private individuals is not available here. The particular individuals who constitute the Examining Corps are in no especial need of the benevolence of a salary increase smacking of a public charity to furnish them a living or to quiet their dissatisfied mutterings. While the Government as a model for other employers undoubtedly owes some consideration to its employees the problem that confronts the Government in the matter of the Patent Office is a far more compelling one. The *personnel* of the Corps are a body of highly qualified and technically trained individuals whose services are in demand in the business world at remunerative compensation and it is simply not worth while to waste time in considering their fortunes as individuals. They are entirely qualified to look after their own personal fortunes and are doing so in ever increasing numbers. The question they have to answer is not whether they can get pay commensurate with their qualifications but merely from what source it will come. Since the Government will not provide it they enter private employment after a few months or years of training in the Patent Office at much higher pay. Everyone who is familiar with the history of the Corps for the last few years knows that the Patent Office has become to a large extent a mere training school for

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young men who after acquiring a little experience are recruited into the employ of private concerns who are willing to pay an adequate compensation for their services. That all this is rapidly reducing to a dangerous degree the percentage of experienced men in the Corps is well known. That the Government must meet this competition or allow our patent system to sink to the level of a second rate or registration system is inevitable. This cannot be answered by saying that if these employees do not want the positions there are others who do. The experience of the Office in begging competent men to take the entrance examinations in the last few years disposes of that argument. I am told that men who have taken the examination on being notified of the entrance salary of $1500 have deliberately turned down the appointment because they had been under the impression that the entrance salary was $2000 and they could get that much elsewhere. It is believed that it will be necessary to lower the standard of entrance qualifications and the consequent standard of efficiency if adequate compensation is not authorized in the near future.

In view of the existing conditions any attempt to remedy the evil by granting an increase of two or three hundred dollars in salary would indicate an utter failure to grasp the problem. Let me repeat, it is not a case of appeasing dissatisfied employees, but of retaining men of training and experience in the service.

One may be hard to convince that he who is connected with the Patent Office does not offer his suggestions from the standpoint of selfish interest when such proposals as are here made are set forth. Yet, it is from no such motives that this article proceeds. This discussion is based on the theory that the one sound argument for changes in the Government management is greater efficiency for the public service. Neither does this article presume to criticise any person or body but to suggest what is believed to be desirable changes which are considered to be the minimum that will secure efficient service. I am endeavoring to prescribe for the public ills here rather than for the fortunes of individuals. It is in this spirit that the following suggestions are made.

I believe that the Patent Office should be detached

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from the Interior Department and instead of being conducted by a Commissioner and two Assistant Commissioners, that it should be administered by a Commission of three and that their terms of office should be about six years, with one expiring every two years and that they should be subject to reappointment. They should be paid a salary of $7500 each. The reason for the salary is that the Office may be able to obtain and retain the services of men with high qualifications and adequate experience. By having their terms expire at intervals of two years, it would prevent any one new man from coming into the Office and making radical changes in the procedure before he became experienced in the detailed practice of the Office. In other words, changes in the Office procedure would be made only as the result of experience and the possibility of one man overturning the existing practice and demoralizing the same would be largely eliminated.

The next and fundamental need is an increase in the number of examiners and the salary schedule to bring the neglected matter of personnel and pay abreast of modern demands for men of their training and profession. We should have a Corps of at least fifty primary examiners at a salary of $4000 each, and 450 assistant examiners consisting of first assistant examiners at a salary of $3500; second assistant examiners at a salary of $3000 each; third assistant examiners at a salary of $2500 each; and fourth assistant examiners at a salary of $2000 each. Provision should be made to promote fourth assistants if considered properly qualified by the Commission after service of three years; third assistants should be promoted after service in their grade of four years; and second assistants after service in their grade of five years. This plan of advancement would put before men who enter the service what they can absolutely depend on if they are diligent, faithful and competent and above all it would produce a body of experienced examiners which is the thing desired. It would provide for the advancement of men as they become experienced instead of having to wait for some one to die or resign to give them the compensation for which they are qualified. If a man is not qualified after twelve years of experience to become a first assistant examiner it seems safe to say that he never will be qualified.

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Some one may say what is the use of proposing such changes when it seems that Congress will not grant them. I will answer by saying that you do not know what Congress will do if the case is properly presented to them. Besides, it is my purpose to set down here what I consider necessary and adequate to produce results needed rather than to state how much I think Congress would grant. It is my belief that Congress does not view this matter in the proper light. The problem from the public standpoint is to provide a salary schedule which will keep men whom the Government is training in its service and get the benefit of their training and experience instead of wasting it or dissipating it to the benefit of private business. I believe that nothing short of the salary schedule here proposed will hold the men in the service. If the Government is going to try to remedy this matter it might as well try something that is not foredoomed to failure. The theory that public positions and the salaries therefor are to be doled out as a charity to deserving appointees is a false one, although it seems to be entertained by a high percentage of people both in and out of public life. The pay of the position should be what will procure efficient public service and the question of charity and pauperism should be relegated to its proper sphere.

Business men and organizations do not expect to get efficient men of the training, qualifications and responsibilities required of Patent Office examiners for any less pay than is named in this schedule and the Government cannot hope to do so and maintain the integrity and dignity of our patent system.

In the early history of the patent system the salary of the officials corresponding to the primary examiner compared favorably with the salaries of federal district judges and even members of Congress.

In 1836 when the examination system relating to patents went into effect, the relative salaries were

Members of Congress	$8.00 per day of attendance
District Judges	$1000 to $1800 per year
"Examining Clerk" Patent Office	$1500 per year

In 1870 when the office of primary examiner was established the respective salaries were

Members of Congress	$5000 per year
District Judges	3500 "
Primary Examiners	2500 "

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Present Salaries:

Members of Congress	$7500 per year
District Judges	6000 "
Primary Examiners	2700 "

The questions passed upon by the district judges and primary examiners are quite comparable and the present difference in their salaries makes clear the fact that the compensation of the one has kept pace with the growth in importance and complexity of the duties of his position. while the other is held at substantially the same salary notwithstanding his duties have similarly grown in importance and responsibility.

REDUCTION OF NUMBER OF PENDING CASES.

In conformity with the policy of the Office to hasten the prosecution of applications, a further and encouraging reduction of the total number of pending cases was recorded. On December 31, 1914, the total number pending, not including those in issue or forfeited, was 109,846. On December 31, 1918, this number had been reduced to 92,156.

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GENERAL DISCUSSION OF THE SUBJECT OF DIVISION—RULE 41.

BY C. H. PIERCE, Law Examiner.

The Courts in considering the question of joinder of two or more inventions in one patent have been much more liberal in upholding joinder than has the Office in permitting it. The question early came before them in Barrett & Hall, 1 Mason, Moody & Fiske, 2 Mason, and other cases reviewed by Story, J., in Wyeth vs. Stone, 1 Story-273. Wyeth's patent covered two machines, a cutter and a saw, successively used in cutting ice, the one following and completing the work of the other. Reviewing the attitude of the courts in previous cases Judge Story said:

> I agree that under the general patent acts, if two machines are patented, which are wholly independent of each other, and distinct inventions for **unconnected objects**, that the objection will lie in full force, and be fatal. The same rule would apply to a patent for several distinct improvements upon different machines having no common object or connected operation.

In the case on trial, however, he says:

> Construing then the present patent to be a patent for each machine **as a distinct and independent invention** but **for the same common purpose** and auxiliary to the same common end, I do not perceive any just foundation for the objection made to it. If one patent may be taken for different and distinct improvements made in a single machine, which cannot well be doubted or denied, how is the case distinguishable from the present? Here are two machines, each of which is or may be justly auxiliary to produce the same general result, and each is applied to the same common purpose. Why then may not each be deemed a part or improvement of the same invention? Suppose the patentee had invented two distinct and different machines, each of which would accomplish the same end, why may he not unite both in one patent, and say, I deem each equally useful and equally new, but, under certain circumstances the one may, in a given case be preferable to the other? There is a claim in the Patent Acts which requires that the inventor, in his specification or description of his invention, should "fully explain the principle and the several modes in which he has contemplated the application of that principle or character by which it may be distinguished from other inventions." Now this would seem clearly to show that he might lawfully unite in one patent **all the modes**, in which he contemplated the application of his invention, and all the different forms of machinery, or modifications of machinery,

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> by which or to which it might be applied and if each were new, there would seem to be no just objection to his patent reaching them all. *A fortiori* this rule would seem to be applicable where each of the machines is but an improvement or invention conducing to the accomplishment of one and the same general end.

The decision also discusses the meaning of "the thing patented" as it occurred in the statute.

This decision is quoted to show that at a very early time the courts took a very liberal view of the privilege of joinder of inventions when directed to a common purpose and auxiliary to a common end. The statements as to the joinder of the various modifications or species of an invention are remindful of the complaint in the case of Benjamin vs. Dale, 158 F. R., 617, against the modern development of the Patent Office practice in regard to specific improvements.

In Hogg vs. Emerson (6 Howard) it is said that,

> There seems to have been no good reason at first, unless it be a fiscal one on the part of the Government when issuing patents, why more than one in favor of the same inventor should not be embraced in one instrument, like more than one tract of land in one deed, or patent for land. (Phillips on Patents, 217.)
>
> But to obtain more revenue, the public officers have generally declined to issue letters for more than one patent described in them. (Renonard, 293; Phillips on Patents, 218.)
>
> The courts have been disposed to acquiesce in the practice as conducive to clearness and certainty. And if letters issue inadvertently otherwise, to hold them, as a general rule, null. But it is a well established exception that patents may be united, if two or more, included in one set of letters, relate **to a like subject** or are **in their nature or operation** coupled together. (Authorities cited.) Those here are of that character, being all connected with the use of the improvements in the steam engine, as applied to propel carriages or vessels and may therefore be united in one instrument.

(The inventions were an engine, a propeller, and a capstan.) This case was reviewed and affirmed (11 Howard, 587, Dec. 1850) and it was stated with regard to the objection that "one set of letters patent for more than one invention is not tolerated by law":

> But grant that such is the result when two or more inventions are entirely separate and independent—though this is doubtful on principle—yet it is well settled in the cases formerly cited that **a patent for more than one invention is not void, if they are connected in design and operation** * * *.

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In Wyeth vs. Stone (1 Story) in order to render different letters patents necessary, it is said:

> * * * the inventions must be "wholly independent of each other and distinct inventions for unconnected objects"; as one to spin cotton and another to make paper.
>
> Again, if one set of letters patent is permissible for one combination of many parts, as is the daily practice, surely one will amply suffice for two or three portions of that combination.

See also Gill vs. Wells, 22 Wall. Bates vs. Coe, 98 U. S.

In Sessions vs. Romadke, 21 F. R., where the inventions granted in one patent were for various disconnected improvements in a trunk, it is held that:

> In fact, there is no connection, either in purpose, design or operation between the several inventions. They are not like a combination of various devices or improvements, all of which make one operative mechanism—one concrete organization. * * * * At best it is a matter of serious doubt whether all the claims of the patentee should have been joined in one patent.

The court made the filing of a disclaimer limiting the patent to one of the inventions a condition precedent to the grant of the relief sought. So far as I am able to find this decision stands as almost, if not the only, modern case holding a patent bad for plural patenting and there the court, seemingly not without doubt, made its decision for lack of connection either in purpose, design, or operation between the several inventions.

In many instances patents have been held bad as being double patenting or repatenting to the same inventor, of the same or substantially the same invention where no divisible subject-matter existed, but cases where patents are void for including too many subject matters in the grant are almost non-existent.

On the other hand the courts have repeatedly held that the grant of a patent to an inventor exhausts his claim and no subsequent patent to him (except by way of correction) may be upheld. To sustain a second patent it must be something substantially different from that comprehended in the first patent. It must consist of something more than a mere distinction in breadth or scope. It is not intended to enter here into the question of double patenting, which has already been fully and

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ably discussed in these papers, except so far as to point out that in case there is no substantial difference in the invention set forth in claims, the issue of more than one patent thereon puts all or a part of the invention in jeopardy. Such claims should never be required by the Office to be divided, or if voluntarily divided, different patents should not be issued thereon, but consolidation of claims of this character should be required or one rejected on the other when allowed, as circumstances may dictate.

Attention is called to Underwood vs. Gerber, 149 U. S.; Miller vs. Eagle, 151 U. S.; Suffolk vs. Hayden, 3 Wallace; Plummer vs. Sargent, 120 U. S., 442. See also *in re* Creveling, 25 App. D. C., 530; Palmer Tire Co. vs. Lozier, 90 F. R.; and *ex parte* Edison, C. D. 1914.

This principle has long been recognized in the Office and was extensively discussed in *ex parte* Holt, C. D. 1884, page 55 et seq., and is the foundation of the practice which requires the rejection of a pending claim when a claim to the same indivisible invention has been passed to issue. *Ex parte* Osborne, C. D., 1900; *ex parte* Carpenter, 110 O. G.

So far then as held by the courts it may be said that the presence and claiming in a single patent of inventions entirely distinct and independent, and unconnected in purpose, design or operation, would probably be held to render the patent void, but not so if the inventions related to a like subject or were in their nature or operation coupled together or were for the same common purpose and auxiliary to the same common end.

Within the wide discretion permitted the Commissioner it would be possible to adopt a policy in which no division or separation would be required of inventions which would be upheld by the courts if patented together. This is one limit to that discretion.

The other limit is marked by the question of double patenting and the wider questions of public policy. It is probable that within his discretion the Commissioner might exercise his jurisdiction to require division except where and to the point that double patenting would be held as to the patents resulting from the division required. Beween these polar positions, the attitude of the Office has at different periods oscillated in a wide

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zone. The discretion in respect to division is reviewable on appeal and must be exercised with reference to the particular case and not by rule. In the Steinmetz case (C. D. 1904) the Supreme Court held Rule 41 to be invalid. This rule at that time stated that "Claims for a machine and a process in the performance of which the machine is used must be presented in separate applications." There were separate statutory classes but as the court stated:

> * * * to establish a rule applicable to all cases is not to exercise discretion. Such a rule ignores the differences which invoke discretion and which alone can justify its exercise, and we are of the opinion therefore that Rule 41 is an invalid regulation.

Following this decision the Rule was restored to its older and its present form.

The effect of this case has been to make it necessary to consider each case individually and in the exercise of discretion thereon determine whether the inventions therein should issue in one or more patents and from a requirement of division, an appeal may be taken.

The discretion in the Commissioner to require division recognized in Bennet vs. Fowler, 8 Wallace, is again recognized in the Steinmetz case with the limitation of the right of review imposed. In *ex parte* Herr, C. D. 1887, pp. 112, 113, Commissioner Hall stated:

> In every particular in which the Commissioner possesses any discretion it should be exercised in the direction of public policy, in the proper and due administration of the office, in subserving the great purpose of the patent system for the encouragement and development of the arts, and in securing to patentees just and valid patents without unreasonable trouble or expense in obtaining them. That the Commissioner is vested with greater or less discretion relative to the administration of his office is unquestionable. He may prepare and establish, with the approval of the Secretary of the Interior, regulations for the conduct of proceedings in his office. Under this provision of the statute he has, from the beginning, exercised authority to establish rules until there now exists a code of practice. The statute has always been regarded as authorizing a rule directing when more than one invention may be comprehended in one patent (Rules 40, 41). That a discretion in this particular is vested with the Commissioner is recognized and settled in numerous decisions of the Courts: Pennoyl Salt Mnfg. Co. vs. Gugenheim (3 Fisher, 423); Same vs. Thomas, (5 Fisher, 148); Goodyear vs. Central R. R., (2 Wall. Jr., 356); Goodyear vs. Wait (3 Fisher, 242); Rubber Co. vs. Goodyear (9 Wallace, 788); Bennett vs. Fowler (8 Wall., 445); McKay vs. Dibert (C. D. 1881, 238); and Jones vs. Sewall (3 O. G., 630).

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In *ex parte* Blythe, C. D. 1885, Commissioner Butterworth had held to the statutory classes as lines of cleavage between patents, saying:

> I am compelled to hold that the plain provisions of the statute, as well as the weight of judicial opinion and the dictates of what seems to me common sense, require that arts, machines, manufactures and compositions of matter should be made the subject of separate and independent patents, except as above indicated.

The exceptions were a new process and a new product, and processes and products mutually dependent. This was overruled by Commissioner Montgomery but was revived and reaffirmed by Hall, C., in *ex parte* Herr, and particularly with reference to process and machine.

This theory is no longer tenable since the Supreme Court has declared invalid (in Steinmetz, *supra*) a rule intended to enforce in all cases this precise line between machine and process. A necessary conclusion from that opinion is that the Commissioner must exercise his judgment in each case and cannot lay down an unvarying rule of division even if that rule be founded on the statutory classes.

The policy of the Office in the exercise of the discretion, as to division, intrusted to it, has in general been influenced by fiscal considerations but more largely by the necessities of search and examination imposed by the statute.

The fiscal reasons referred to in Hogg vs. Emerson, above, and in Phillips on Patents, pages 217, 218, were reviewed and their application to division stated by Fisher, Commissioner, in *ex parte* Yale, C. D. 1879, in which it was said that,

> In both of the cases quoted, it is suggested that the union of many inventions in one patent would deprive the Government of its proper fees. This is a legitimate consideration. A fee of $15 is now charged for examination into the novelty, utility and patentability of an invention. This is a very reasonable charge, and is much less than it would cost to make the examination in any other way. Indeed the fees for all services in the Patent Office are less than are charged in any other country, while the service performed for the applicant is much greater.
>
> It would be unjust to the Government, to the public at large, and to other inventors to permit one of their number to present a batch of inventions for examination under a single fee, for he would receive more of the time of the examiner than he has paid for.

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This case sets forth perhaps more fully than any other the question of fees as bearing upon division. Among subsequent cases bearing on the same subject may be cited *ex parte* Rice, C. D. 1874, and *ex parte* Carter, C. D. 1889. The Yale application was ordered divided because it embodied two distinct inventions, having no community of operation, belonging to different classes and involving a double labor of examination. The question of separate fees was apparently an influential consideration but not controlling, nor have I been able to find that anywhere in the modern practice of the Office, the question of fees has been treated as the controlling thing. The duties imposed by law must be collected, but the increase of those duties, as a reason for division, has been treated as wholly subordinate to other considerations. Perhaps one reason is the manifest impossibility of equalizing the work done for a fee under a system where an automatic telephone system, if unitary, and a belt buckle, are by law examined for the same fees.

The main considerations which have controlled the policy of the Office in regard to division and joinder are the necessities of search and examination imposed by the law. The requirement to make a search and the authority to establish rules and regulations for the conduct of proceedings in the Office are directed to the Commissioner and the statute has always been construed as authorizing the establishment of rules in relation to joinder. The rule may not supersede discretion but it may direct and guide its application.

The distinctive feature of the American patent system, as contrasted with most other systems, is the idea of a careful, complete and rigid examination into novelty. Such a system is absolutely dependent upon an organization of the existing arts, so far as published, that they may be accessible. The widespread field of arts is too extensive and too constantly changing and subdividing to allow of any one mastering it. Hence here as in other branches of human activity specialization enters. This specialization in an art develops first—not in the Office—but with workers in the art itself, and in his endeavors to keep the field of search abreast of the active art it becomes necessary for the examiner to arrange the published art in classes and subclasses which are direct-

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ed solely to the purpose of making the existing state of the art accessible. All of this is vital to the existence of a search system and without it the system could neither exist nor the direction of the law be carried out. The necessity for this division and classification so as to make accessible the existing state or condition in any branch of the arts, has been recognized as a determining factor from the beginning of the search system. In the case of *ex parte* Yale, C. D. 1869, above cited, Fisher, Commissioner, gave it controlling weight. In *ex parte* Herr, C. D. 1887, Commissioner Hall recognizes the constantly changing and advancing state of the arts and says:

> In this connection is must be repeated that classification is not effected arbitrarily by the Office. It is the natural work of those who create and develop the arts by invention and otherwise. The Office simply recognizes those relations and classes which exist in the nature of things. Why shall they not be thus recognized? It is impossible to conduct a great establishment like the Patent Office, examine the inventions of sixty millions of people, survey the wide and extended field of art of the whole world, to determine their novelty and utility, and accomplish this speedily and satisfactorily, except by such arrangement and classification of subjects; and this classification must be modified and multiplied from time to time to meet the progress and advance in industry.

It is unnecessary to multiply decisions on this line—a casual inspection of the decisions of Commissioners for fifty years past will make it evident, I believe, that in the exercise of the discretion imposed on them with reference to what may be patented in one patent, they have constantly held in mind as the controlling factor, the existing state of the arts. If such a state of art existed as called for division of a case, the rule has been to follow the existing state of the art so far as possible. If no state of the art called for or justified division and the inventions were not wholly independent in their nature, but were connected in design and operation or were for a common purpose and auxiliary to the same common end, division was not called for.

The classification was created for the purpose of enabling the state of the art to be found and the patents and publications come to be organized into arts and classes, with a specialist in charge of examination in each, and they are subdivided according to what is

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found to be the tendencies of development and each group and subgroup is assigned to someone who is a specialist in that group or subgroup.

In this way particular cases receive the attention of one specially trained to knowledge of that kind, and the metes and bounds of novelty may be surveyed by one acquainted with the field and the terms and descriptions criticised by one familiar with them. This tends to insure validity in the patent and protection to the public.

The object of the patent system is the promotion and development of the useful arts, and this object is always to be borne in mind, and Patent Office practice in all its branches should always be directed so as to encourage and stimulate the progress of invention.

No more unwelcome objection can be made to an application than that of improper joinder and the objection should not be made unless the foundation for it is clear in the clear distinction between the things directed to be divided, and in case of related inventions, such as the parts of a machine, or process, machine and product, there should exist in the state of the art a condition of development in which the several distinct inventions are capable of use in other relations and *call for investigation in different or divergent fields.* If this condition exists the interests of the inventor whose application is being considered, as well as of subsequent inventors and the public at large may be subserved by dividing between the distinct inventions, so that each may receive its expert examination and if patented be filed with others of like character for future searches. Such requirement should be made as early in the case as possible and if clear, before action on the merits is given. It should be made complete and if some of the inventions go to a different division, where additional division may subsequently be called for, the case should be referred to that division at once, so that the requirement may be fully made, and the inventor having once complied with a requirement may not be subsequently met by other and successive requirements in one or another of his cases. Furthermore, the lines between the inventions should be clearly laid down and explained, if necessary, and the claims to be separated designated. The requirements should not be based on trivial differences. It is true that

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a requirement of division does not necessarily mean that both inventions are patentable. The Court of Appeals in the Isherwood case, 245 O. G., 847, reiterated former practice in upholding the rejection of one species on another previously patented. Neither this case, however, nor others of a like nature are to be taken as preventing an examiner from rejecting one claim on another as being to the same substantial invention with differences which are immaterial or wholly unpatentable or the mere substitution of a well known expedient.

In requirements, with relation to species, under *ex parte* Eagle, perhaps more often than with other kinds, it may and does occur that so-called species differ from one another by the substitution of a known equivalent or other trivial or unpatentable variation merely, and if the applicant be required to divide without further information, does so, and is met by a rejection on his allowed species, it is not good practice. The Office is an office of experts primarily and no good reason is seen why in such cases the Office should not act upon its expert knowledge and reject such claims, or at the very least clearly and explicitly notify the applicant that the one is not patentable over the other. It does not reflect credit on the Office to notify an applicant that he must divide because he has distinct inventions and when he does so, reject the one on the other because they are the same, or substantially the same. The *ex parte* Eagle rule is a necessary one, but one which may be applied in a very harsh and inequitable way, if too strictly construed and applied under circumstances above stated. In the wise exercise of discretion, bearing in mind always the encouragement of invention, division in such cases will only be called for peremptorily where there are two real inventions presented. A too rigid, technical and analytical dissection of applications often proves harassing and discouraging to the inventor, does not in the end save any work in the Office, and tends to prevent instead of furthering the purpose of the law, nor has it any value to the public, and it has been repeatedly condemned by the courts.

Rule 41 reads as follows:

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> Two or more **independent** inventions cannot be claimed in one application; but where several **distinct** inventions are **dependent** upon each other and **mutually contribute** to produce a **single result** they **may be** claimed in one application.

This rule has been changed several times but has after short periods been restored to its present form and has with such intervals existed for nearly fifty years.

Inventions are classified as being dependent or independent. The latter may not be joined—the former may perhaps be.

Independent inventions are such as "are not connected in design or operation and which do not mutually contribute to produce a single result within the meaning of the other branch of Rule 41." See *ex parte* Lord, C. D. 1890, and references therein found.

Separate machines, of a series of machines, where each performs only its own function and its use and result is unmodified by the use or result of the other and where each would operate in the same way, were the other not present, or improvements in such machines, are wholly independent. Different specific devices, even if embraced within a genus, where they bear a substitutional or alternative relation, have been held uniformly to be independent. "But improvements in the same art or machine, although as improvements merely they may be wholly independent of each other, are so connected through the original invention that they are capable of serving a common end and hence according to the doctrine of the courts may be covered by the same patent and joined in the same case." Robinson, section 476. Division in such case falls back for support on the second part of the Rule as interpreted in Stearnes, C. D. 1890; Wilcox & Borton, C. D. 1888, and other cases.

The words "several distinct inventions" occur in the Rule. Primarily there must be more than one invention presented in a case before a question of division can arise. Many double patenting cases probably arise from a disregard or misinterpretation of this elementary proviso—as, for example, those cases where a patent is held void as being based on a difference in breadth of statement of a previously patented invention. It is proper here to refer also to cases where an element is claimed and a combination notoriously old and broadly stated.

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An inventor devises a pressure gage and claims it specifically, illustrating it with a conventional boiler. A claim embodying the specific gage combined with a boiler is technically a combination claim and classifiable in a different class from the gage, but it is obvious to an expert that there is either only one invention, or if possibly a new result is effected in connection with a boiler by reason of the particular gage construction, it is a combination whose result is entirely dependent on the presence of a gage of that character. In citing this illustration I am not unmindful of cases like *ex parte* Mumford, C. D. 1914, and other previous cases where it is clearly laid down that an element in a combination may not be ignored. Neither this, however, nor other previous cases, prevents the exercise of discretion in requiring division in cases where there is apparently ***only one real invention*** in a case and the question is one of the form in which the invention should be claimed. Where in the examiner's opinion, as an expert, there is only one invention, division should not be required. Most difficulties that arise in connection with cases like the above, and they are not infrequent, would be resolved by the simple process of examining the gage and acting on the claims as to form and merits. It is possible that in the development of such a case, it may become apparent that there are two distinct matters of research into divergent fields, one, that of the element, the other, that of the combination. In such case the question of joinder may be taken up then.

The difficulties arising from divisions which rest on the same substantial invention are illustrated in Porter vs. Louden, 7 App. D. C., 64, as well as in the numerous double patenting cases in the records. A consideration of the subject-matter in sections 460 to 467, Robinson on Patents, is profitable.

In this connection reference is made to the Gaboury case (37 O. G.) and it is noted that where identity is found to exist between one of two inventions to be divided, and subject-matter claimed in an allowed case, the action is rejected on the allowed case and not division.

The next requirement as to divisible inventions is that they *must be distinct,* as claimed, since it is between

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claims that division is required. *Ex parte* Holt, C. D. 1884, gives a good example of claims between which no clear line can be drawn because they overlap and are inextricably interwoven in the subject-matter claimed. See also *ex parte* Ransom, C. D. 1887, and Railway Register Co. vs. Broadway & Seventh Avenue R. R., 26 F. R.

Cases of this character, where the inventions may or may not be distinct, if properly claimed, but are certainly not distinct as claimed, arise also when a product is defined wholly or in part by a particular process of making, or a process by the elements of a particular machine which carries it out.

The product may be makable many ways and the process may possibly be practiced by various mechanisms, but when claimed as stated they are tied rightly or wrongly to the particular process and particular machine. Division may arise later but not when the claims are in that condition. The inventions claimed are not distinct.

If there are present two real inventions, and they are distinct and distinctly claimed, the question arises whether they are dependent on each other and mutually contribute to produce a single result and what the nature of that dependence may be and the character of the contribution and result.

Inventions may be said to be dependent within the meaning of Rule 41 when they are connected in their design or operation, have a distinct relation to each other, a direct coördination and coaction so as to produce a result which two independent inventions acting separately could not produce.

Robinson, section 741, says:

> That the inventions pertain to the same subject or belong to the same genus or are by nature adapted to a common use should any one desire so to employ them does not constitute such dependence as to justify joinder. But where the ultimate end for which one was created cannot be reached without the employment of the other or where the operation of one results in the production of the other or where the use of one involves the concurrent or cooperating use of all the rest, or where one is generic and the other a particular species of that genus this dependence exists and the inventions may be joined.

Improvements in the several parts of a machine are connected in design and operation, are dependent upon

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each other in the sense of the Rule, for they are parts of a specific organization and mutually contribute to produce a single result, which is the single function of the whole.—Robinson, section 478; Herr, C. D. 1887; and *ex parte* Lord, C. D. 1890.

In the discussion in the latter case, Mitchell, C., held that the coaction need not involve such intimacy of interconnection and coöperation as to result in a combination—a third invention—to amount to interdependence under the Rule.

The particular case was one of process and apparatus and it was held that the design of both was to work out a given result and that this was sufficient to bring them under the term interdependence as used.

The contribution must be the proximate immediate direct act of the inventions, respectively, not a remote one. It must not be like that of the seeder, the harvester, and the mill, all of which contribute remotely to the production of flour, although in proper instances the contribution of the plow and seeder might come under the rule.

Nor is the result contemplated a remote one or one existing in the mind of the user but the direct proximate effect of the design and operation of the inventions themselves.

The plow and seeder may have such a result, but the seeder and cultivator can only be connected in the mind of the farmer.

In *ex parte* Lord (C. D. 1890), it is said that where the several distinct inventions are thus dependent upon each other and do mutually contribute to produce a single result they may be claimed in one application and that it is equally clear that they may be separated into as many patents as there are distinct inventions. He classifies them all as "cases of optional division." This case follows in the Commissioner's Decisions the well known case of Mullen & Mullen. Mullen & Mullen illustrates, as compared with Robinson, section 478, above, and *ex parte* Herr, a very confusing use of "independent." In Mullen & Mullen there were presented two improvements in a seeder, one in a feed regulator, and one in a drill tooth. These are there denominated independent inventions, and perhaps rightly so, since their contribu-

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tions are not joint but several and in disconnected ways they improve the machine without changing its organization. Whether they be denominated independent and divided as such or be classified as Robinson, section 478, states, as dependent through their connection together in the machine and then divided because of their capability of separate use and their acquired status in the arts, seems immaterial since in Mullen's case it was clearly intimated that the case presented would be entirely different if the machine were a new one.

Other cases on the question of isolated improvements in the parts of an old machine are *ex parte* Stearnes, 1890; Wilcox & Borton, 1888; Healey, 1898; Speckbaugh, 1891; Wilkerson, 1899; and Pelton, 1901. See also Robinson, section 472.

It is also desirable to define what is meant by "capable of use in other relations," and "status in the arts."

If in a machine class M there are claims to a subcombination or an element B along with other claims to the organization of the machine or to other elements, or both, and it is found that B may also be used in machines of the type or class N, O and P to perform there its functions, it answers the term "capable of use" etc. If, however, it must be transformed from the thing claimed in order to be so used in N, O, P, by the exercise of invention or by extensive transformation and changes so that its nature is considerably changed, the term does not apply and the term is not to be used too elastically. It is very easy to say, "This is an elevator," or "This is a conveyor or a gearing organization capable of general use," where in fact its whole arrangement and construction are special and not general. Of course when a subcombination or element has modifications specially devised for the particular purpose of a machine or for coaction with other parts similarly modified there is no division possible because its structure is special and not such as is adapted to general use.

It was held in *ex parte* Herr, 1887, Wilcox & Borton, 1888, and Learned, 1893, that the use in other relations must be in other classes or arts and not merely in other and sundry types of machines in one art (as the sewing-machine art). I do not believe that this restriction is warranted by more recent practice. In Mullen & Mul-

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len (*supra*) it is certainly true that the use of the drill tooth is restricted to the various types of drills in the drilling art and in many cases since *ex parte* Learned was given, such as *ex parte* Healey, 1898 (bicycles); Pelton, 1901 (seeders); Wilkerson, 1899 (chair); Stearnes, 1890 (cooking range), improvements have been held divisible although of no utility except in the particular arts in question.

"Status in the Arts" has been determined in various ways. If a thing, the subject of invention, has acquired a place as the subject of separate manufacture and sale (other than as mere replacement of a lost or broken part) in trade and commerce, it is sufficient. This information may be drawn from any ordinary source of trade information. The Office, however, in following art development has been compelled to rely on the acts of inventors to show that development and this is to be found in the published patents largely. The necessity for this reliance is ably set forth in the Herr and Wilcox & Borton cases. The status in the arts is determined not only by trade but by the acts of inventors themselves, and when inventors have made inventions similar to the one under consideration the subject of separate patents and applications in considerable numbers, it may be safely regarded as having attained a distinct status, so that subsequent inventors claiming inventions of the sort should be required to present them in separate applications. Not one or two patents only establish a status and probably no exact definition of the term is possible since it is the sum of all the evidence collected which determines. This evidence is usually best found in a separate classification and ordinarily it may be assumed, that where a number of patents directed solely to a specific part or subcombination of a machine or art have been collected and are evidenced by the Office classification, it is strong evidence of the existing state of the art and is to be regarded as such. If such a state is found and the device in question is capable of use in other arts or in other types of machines in the art in which it is presented, and is separately and distinctly claimed, it should be divided. The evidence of the existing state of the art, unless well known, should be presented as a reason for division, in addition to the citation of the

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cursory art in all branches of the proposed division to enable applicant to make an intelligent election. See *ex parte* de la Sala, C. D. 1888, Harris, C. D. 1890, and Stearnes, C. D. 1890.

Strong effect has uniformly been given to the existence of different and divergent fields of search.

The mere fact of separate classification must be regarded as strong evidence but not as of itself sufficient reason for division, since it is impracticable to keep it in exact step with the progress of the arts. It may be coincident or before or behind. A separate series of patents whether classified or unclassified, showing the status of art actually reached, should dominate this phase of the question, unless actual knowledge of the condition in trade and manufacture is available.

In a continuation of this paper I shall endeavor to point out briefly the application of the general principles to certain cases.

WITHHOLDING PATENTS ON INVENTIONS USEFUL TO THE ENEMY.

Up to the signing of the armistice the committee of primary examiners having in charge the secrecy of war inventions, acting on its own initiative or in coöperation with the Army and Navy Patent Board had recommended and with the approval of the Commissioner had applied orders preventing disclosure and publication in about 2100 applications of which 1040 were either withdrawn or withheld from issue upon being found allowable and upwards of a thousand (1000) were still pending and being prosecuted to determine their patentability.

Since the signing of the armistice, Rescinding Orders have been applied to nearly all cases to which the original orders preventing disclosures, etc., were applied, releasing the applicants from maintaining secrecy.

This committee has also examined and considered approximately two thousand ideas, suggestions, devices, etc., submitted by sketch or description, that it was be-

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lieved might be of service to the cause of the allies or the United States Government. These were independent of applications for patents and were received from all quarters of the globe.

Wherever proposed plans or devices were found practical and of possible or probable value, the attention of that department of the Government most interested therein was directed thereto, or the writers placed in correspondence therewith.

Of these suggestions some two hundred involved disclosure of sufficient merit and importance to be forwarded, and it is believed many of them were approved or adopted by some department or branch of the Government.

OF PERSONAL INTEREST.

Mr. John C. Pennie, senior partner of the firm of Pennie, Davis, Marvin and Edmonds of New York, has been summoned to Paris to act as legal adviser of the American Peace Commission in connection with matters relating to patents and trade-marks. He sailed from New York on the evening of Sunday, March 9th, for Brest and will proceed at once to Paris where he will remain until the work of the Commission is terminated. He will be associated in this work with Mr. Bernard Baruch of the War Industries Board, Mr. Charles H. MacDowell, who has been in charge of the production of chemical and explosive materials for the War Industries Board, Dr. Taussig of the Tariff Commission, and others.

Mr. Frank E. Barrows has become a member of the firm of Pennie, Davis, Marvin and Edmonds, of New York.

The firm of Brown, Hanson and Boettcher was dissolved Dec. 31, 1918.

Chas. A. Brown, Arthur H. Boettcher and John A. Dienner continue the practice of patent law at 1550 Monadnock Block, Chicago, under the firm name of Brown, Boettcher and Dienner; the same firm continue the Milwaukee office at 1136 Wells Bldg.

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Announcement is made of the formation of a new firm of attorneys comprising Messrs. Harry Frease, Arthur W. Bond, Arthur E. Merkel and George W. Saywell, with offices at Cleveland and Canton, Ohio.

The firm of patent attorneys Fenton & Blount, Philadelphia, Pa., have announced that Alston B. Moulton has become a member of the firm.

Mr. John F. Robb, of the firm of Robb & Robb, has left Washington to assume charge of the firm's new office in Cleveland, Ohio.

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This book, published in 1914 with half calf binding at $7.50 in Canada and $8.50 in the United States, has met with a widespread sale, not only in Canada, but among the patent lawyers of the United States, whose clients have business in Canada. The work is the only modern text book on Patent Law in Canada, and is referred to as an authority in all patent suits (see Concrete Appliance Co. v. Rourke 8 W. W. R. 6; Bitulithic & Constructions Limited v. Canadian Mineral Rubber Co. 8 W. W. E. 207). Price $5.00 per copy.

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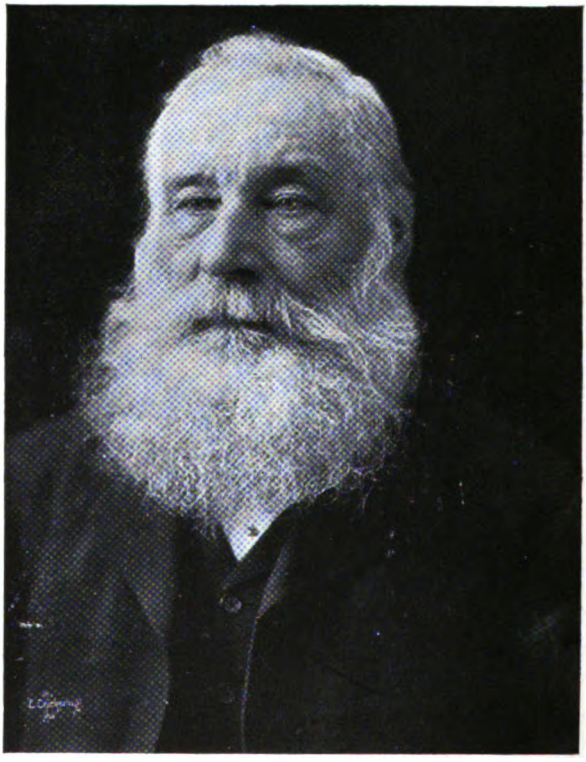
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SIR WILLIAM HENRY PERKIN

(Cut supplied through courtesy of National Aniline & Chemical Company.)

INVENTED THE FIRST ANILINE DYE AT 18 YEARS OF AGE.

(See Age of Production in Invention, etc., page 439.)

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EDITORIAL.

Henry IV of France, considered by historians to be one of the greatest sovereigns the French ever had, encouraged his people to develop those arts in which they seemed to have the greatest aptitude. He recognized the artistic ingenuity of his people and encouraged them in the production of things requiring those faculties. To this end he was responsible for the introduction of the silk industry in that country and also of the manufacture of expensive fabrics, rugs, glassware, etc., for which that nation has become famous. His aim was expressed

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in one of his historic phrases—"la poule au pot le dimanche," which when Americanized might be expressed as "the full dinner pail." By his foresight in concentrating on the proper industries, he virtually attained his ideal.

Success is not always to the pioneers; perhaps it comes oftener to the imitators. Why not ourselves profit by the successful examples of the past and follow up and develop those lines in which we excel? We are recognized to-day as the most practical inventive people of the world. Why not then devote our efforts to devising cheaper, quicker and better modes of doing things rather than spending time in developing those businesses where we must ultimately compete with European and Asiatic low-wage labor? But if we are to concentrate on this line of endeavor, the best stimulus which can be given to it is the securing of a modern and efficient patent system. Many of us who are very close to the scene do not appreciate that the whole country is not behind the present patent system. It was somewhat of a surprise a few years ago in an address delivered by one of the members of the Patent Committee of Congress, to hear that a great part of his effort, and he was in sympathy with the purposes of the patent system, was to prevent the wrecking of the patent system by those who were not in favor of it. In view of the disappointing experiences of some of our inventors, it is not surprising that members of Congress from some sections of the country reflect a distrust of and lack of interest in the whole system. What must have been the state of mind of the inventor who filed an application for patent on a farm wagon and tried to sue an infringer, only to be met by the answer that his patent did not cover the whole wagon, but only the hinge on the tail board! "And that," says he, "I never invented at all. I bought that at the county store."

Although patents granted in this country are *prima facie* valid, one has but to look at the decisions of the courts, collated each week in the *Official Gazette*, in order to appreciate the fact that this is now practically only a legal fiction.

One of our latter day comedians says that when the audience does not laugh at your jokes, the trouble lies with you, not the audience. The Congress but reflects

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the attitude of the people. If the people are not in sympathy with the patent system as it exists at present, don't blame the people—change the system to suit them.

For years this country did business with a clumsy and archaic banking system, appreciating all the while its insufficiencies, but still unable to shake off the lethargy due to custom. Experience now shows that demolition of the old system occurred none too soon, for without the federal reserve system, all will agree that the ability to finance this war with the least disturbance to business would have been virtually hopeless. Shall we wait too long before modernizing the patent system?

Everything seems to indicate that we are about to enter upon an age where supremacy will go to that nation which excels in inventive thought. Let us prepare for it; let us concentrate upon it; let us thoroughly modernize our patent system to take care of it and give to the country a system which will be so satisfactory that Congress will never hesitate to support it.

That the Patent Office should be the first place to receive information as to the various improvements continually occurring in the industrial arts, but that it should be about the last place to receive any of the benefits arising therefrom, sounds somewhat strange.

Such modern improvements as vacuum cleaners, dictaphones, ventilating systems and the numerous other accessories of a modern office building are unknown to the Patent Office building. The writer remembers seeing, not so long ago, quill pens for public use on the library tables in the British Patent Office. This might have been because of the great respect of the English people for custom. At one of the old exclusive schools in that country, the boys still eat off wooden trenchers. An American who ventured to ask why they did not eat off plates was met by the response, "Have you no respect for custom?" The American people are not, however, so deeply entrenched in custom as to object to housing the Patent Office as it should be—in the most modern office building in the country.

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COMMISSION ON RECLASSIFICATION OF SALARIES.

The Legislative, Executive, and Judicial Appropriation Bill for the fiscal year beginning July 1, 1919, contains a provision for the creation of a "Joint Commission on Reclassification of Salaries," of which the following is an excerpt:

> Sec. 9. That a joint commission is created to be known as the "Joint Commission on Reclassification of Salaries," which shall consist of three Senators, who are now Members of the Congress, to be appointed by the President of the Senate, and three Representatives, who are now Members of the Congress, to be appointed by the Speaker. Said commission shall submit its report and recommendations as early as possible, and, in any event, by the second Monday in January, 1920, * * *.
>
> It shall be the duty of the commission to investigate the rates of compensation paid to civilian employees by the municipal government and the various executive departments and other governmental establishments in the District of Columbia, except the navy yard and the Postal Service, and report by bill or otherwise, as soon as practicable, what reclassification and readjustment of compensation should be made so as to provide uniform and equitable pay for the same character of employment throughout the District of Columbia in the services enumerated.

At the close of the last session of Congress the members for the Commission representing the different houses were designated, and shortly after adjournment began holding preliminary sessions for the purpose of studying the task assigned them for execution. One of the first things decided upon was the submission to all of the individual employees involved, falling within the scope of the field to be covered, of a questionnaire. In order to insure the accurate and uniform filling out of these questionnaires it became necessary for the Commission to provide for representation in the various departments and bureaus in which the several employees perform their duties. Accordingly it was decided to call upon the head of each department to designate a representative of his department, and also to hold elections for representatives of the employees themselves. The plan also involves the selection in each bureau or branch of each department of chosen representatives of such branch or bureau who will have immediate charge of questionnaires and other data emanating from the branch or bureau they represent.

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In the Interior Department Chief Clerk Ayres has been designated by the Secretary as the Department's representative, and Mr. W. Carson Ryan of the Bureau of Education has been elected by the employees as their representative. The representatives in the several bureaus have not yet been officially designated but they will be selected shortly.

At a meeting held on Wednesday evening, April 16, 1919, in the auditorium of the Department of the Interior Building, Senator Henderson, of Nevada, who is a member of the Commission, addressed a good sized audience of employees of the Interior Department on the aims of the Commission and the methods of procedure contemplated by it. Senator Henderson began his address by urging upon all persons concerned the need of earnest coöperation with the Commission and its assistants to the end that its final work shall be of indisputable value not only to those immediately concerned but to the country at large as well, for it is anticipated that the work of the Commission will be accepted as a model to be followed by many large employers of labor, the country over, in their dealings with wage scales and other labor problems.

Special emphasis was laid upon the need of the carefully filling out of questionnaires by the individual employees, since upon the statements made therein the Commission's conclusions must be reached, and it is necessary that these statements shall be true if the conclusions based thereupon are to be just and right.

Senator Henderson emphatically stated that it was the idea of the Commission that the amount of salary paid to each employee should be a fair and just compensation for the services rendered by that employee, and that his promotions should depend upon the kind and quantity of services rendered by him. He distinctly said that it was not the idea to discriminate between classes of employees on any such lines as distinction of sex in the matter of salaries to be paid, but rather that the work to be done and the fitness of the employee to do it should be the test.

One of the contemplated features of the work of the Commission which the Senator mentioned is the introduction of a provision for a number of advances in salary in each grade without forcing the employee to wait

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for promotion to a higher grade. This plan, he pointed out, would continually hold before the employee a hope of bettering his condition and would act as a constant inducement to him to do more and better work. This statement was made upon the supposition, of course, that the advancement within a grade, like a promotion, would only follow as a consequence of faithful and satisfactory service.

Another matter especially mentioned by the Senator was the adoption of the so-called "living wage" as the minimum of the scale of salaries to be fixed upon. He expressed the view that if by the expression a "living wage" was meant merely a wage sufficient to enable the employee to live without being able to lay anything by for the protection of sickness or old age, it was not his idea that a salary representing such a wage was adequate or the one contemplated by the Commission. He stated it to be his view that no person anywhere should be expected to work *merely* that he might live without any hope of laying by a reasonable profit on his labor.

The Senator stated that it was the plan of the Commission to meet with the representatives of the various departments and bureaus and to give them the fullest instruction in advance about the work they were expected to perform. He stated that the Commission proposed to adopt the attitude of welcoming suggestions and of open-mindedness toward any and every plan that might be offered for its consideration, and emphatically asserted that every member of the Commission was firmly resolved that its work should be fair and just both to the Government and to the employees.

Senator Henderson's remarks were followed by addresses by a representative of the Federal Employees' Union, an employee from the Department of Labor, and Mr. Ryan, the representative of the employees of the Interior Department. All of these speakers were enthusiastic about the prospect of the success of the work contemplated by the Commission, and urged the fullest coöperation and aid by all employees to the end that when the work is completed both the Government and its workers shall be satisfied.

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THE APPLICATION OF CERTAIN RULES OF INTERPRETATION AND CONSTRUCTION DETERMINING THE MEANING AND SCOPE OF CLAIMS MADE THE ISSUE OF AN INTERFERENCE PROCEEDING IN THE UNITED STATES PATENT OFFICE.

BY LOUIS E. GILES,
Formerly an Assistant Examiner in the United States Patent Office.

The invention at issue in an interference proceeding in the United States Patent Office is defined in one or more counts, each of which, under the existing practice, is almost invariably identical in terms with a corresponding claim in the application or patent, as the case may be, of each of the respective parties involved. A clear and definite comprehension of the invention which constitutes the subject-matter at issue, as so expressed, is frequently dependent upon certain rules of interpretation for determining the meaning of doubtful terms and upon certain rules of construction for determining the scope of the claim, or claims, in which the issue is defined.

As to the Meaning of the Terms in which the Issue is Expressed.

If a claim which defines an issue in an interference proceeding in the Patent Office is expressed in terms of doubtful or uncertain meaning, it should, if possible, be amended to avoid the objection. If the interference involves applications only, such a claim may usually be put to test and corrected, if faulty, as a result of a motion to dissolve. A claim, however, is not ambiguous or indefinite merely because it is expressed in broad terms which include forms of the invention other than the specific form described in the application in which it is made. If, because of the limitations and imperfections of language, the doubtful and uncertain character of the terms of a claim which defines the issue in an interference proceeding is such that it cannot be obviated by amendment, or if the interference involves a patent, thus rendering correction by amendment impossible or impracticable, it has been stated in the decisions that a meaning should

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be adopted which is consistent with the disclosure of invention as made in the application in which the doubtful claim was first presented. In the case of Curtis v. de Ferranti v. Lindmark (171 O. G., 215; 1911 C. D., 115: affirmed by Court of Appeals, D. C., 171 O. G., 484; 1911 C. D., 433; 37 App. D. C., 311), this rule was expressed by the Commissioner in the following words:

> The claims in issue were taken from the patent of Lindmark, and must therefore be construed in the light of the specification of that patent if their meaning is at all uncertain.

That this rule for determining the meaning of doubtful and uncertain terms should have no application if the issue is defined in clear and definite language is obvious. In some of the decisions, however, the rule is stated in such broad terms as to indicate that the meaning of a claim which defines an interference issue is always to be derived from a study of the disclosure in the application in which it was first presented.

> * * * The meaning given to the counts of an interference must be that intended by the party to the interference first making the claim. (Podlesak and Podlesak v. McInnerney, 120 O. G., 2127; 1906 C. D., 558; 26 App. D. C., 399.)

> It is true, as stated by the Commissioner, that where a party copies a claim of a patent for the purpose of interference it must be read in the light of the disclosure of the patent. (Engel v. Sinclair et al., 152 O. G., 489; 1910 C. D., 310; 34 App. D. C., 212.)

> * * * it is the rule in interference cases to determine the scope of the invention in issue and the true meaning of the claim constituting the count thereof from the disclosure of the party first making the claim. (Slingluff v. Bolin, 182 O. G., 720; 1912 C. D., 257; affirmed by Court of Appeals, D. C., 182 O. G., 975; 1912 C. D., 570; 39 App. D. C., 134.)

That this rule is more properly intended to apply only when the meaning of the claim defining the issue is doubtful and uncertain is, however, indicated in some of the more recent decisions of the Commissioner and of the Court of Appeals of the District of Columbia from which the following quotations have been taken:

> While it is true that the issue will not be strained to cover an invention to which it does not naturally apply and that in case of doubt or ambiguity the issue will be read in the light of the specification in which it first appeared, real and not artificial distinctions must be found in the involved applications or, obviously, there will be no room for the application of the familiar rule. (Western Electric Co., Assignee of McQuarrie and Bullard, v. Martin, 182 O. G., 723; 1912 C. D., 567; 39 App. D. C., 147.)

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If there were any ambiguity in the claims which needed interpretation, they would, in accordance with the well-settled rule, be construed in the light of the Wood specification, in which they were first made. It does not seem, however, that there is any uncertainty in their meaning. (Wood v. Duncan, 183 O. G., 1033; 1912 C. D., 314.)

The Scope of the Issue.

The meaning of a claim which defines the issue of an interference proceeding having been determined, the scope of the issue, as thus defined, is more or less dependent upon certain rules of construction which have been frequently expressed in the decisions of the Commissioner and of the Court of Appeals of the District of Columbia. From an analysis of the decisions it seems to be pretty well established that the rule which controls the construction of the issue in an interference involving patent applications only, is somewhat different from that which should be observed in an interference in which a patent is involved and in which the claim which defines the issue was first made in the application which resulted in said patent.

Rules of Construction Applicable when Applications only are Involved.

In an interference involving patent applications only, the claim which defines the issue should be given the broadest construction which is consistent with a fair interpretation of the terms in which it is expressed. What is a fair interpretation of its terms should be determined in accordance with the generally recognized rules of construction. Ordinary words should be given their usual meaning. Terms which have acquired a recognized technical significance should be interpreted in accordance therewith. Limitations which are not expressed in the claim should not be interpolated therein by construction. If the claim is of greater scope than the invention which it represents it should be amended. That such is the rule of construction which should be applied by the Patent Office, when determining the scope of a claim which defines the issue in an interference involving applications only, has been clearly announced in many decisions of the Commissioner and of the Court of Appeals of the District of Columbia.

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No better method of construing claims is perceived than to give them in each case the broadest interpretation which they will support without straining the language in which they are couched. This method would seemingly give more uniform and satisfactory results than are obtained by methods largely in vogue—such, for example, as that of importing limitations from the specification according to the exigencies of the particular situation in which the claim may stand at a given moment. The method suggested also seems to have the advantage of according in its results with the probable intentions of the inventor at the time when the claim is drawn. In presenting claims to the Office the object constantly sought is breadth. Where a limited meaning is intended when a claim is drawn, what possible objection can there be to imposing that meaning unmistakably upon the claim by its express terms? That a claim which does not carry its true meaning upon its face misleads those affected by the patent instead of guiding them as to its true scope is alone sufficient reason why the Patent Office should refuse to recognize proposed limitations of claims which have not been clearly expressed therein. (Podlesak and Podlesak v. McInnerney, 123 O. G., 1989; 1906 C. D., 265.)

In general while applications are pending in this Office the claims thereof will be construed as broadly as the ordinary meaning of the language employed will permit. (Junge v. Harrington, 131 O. G., 691; 1907 C. D., 340.)

It is well settled that claims forming the issue of an interference will be given the broadest interpretation consistent with the plain language of the claims. (Burden v. Manson, 185 O. G., 529; 1912 C. D., 393.)

In an interference proceeding we must give to claims the broadest interpretation which they will reasonably support, and we are not at liberty to import limitations therein to meet the exigencies of a particular situation. (Miel v. Young, C. D., 1907, 561; 128 O. G., 2532; 29 App. D. C., 481; Lindmark v. Hodgkinson, C. D., 1908, 540; 137 O. G., 228; 31 App. D. C., 612.) The reasonable presumption is that an inventor intended to protect his invention broadly and, consequently, the scope of a claim in an interference proceeding should not be restricted beyond the fair and ordinary meaning of the words. The issue here is that of priority under the claims as drawn, and not of priority under other and different claims. (Kirby v. Clements, 216 O. G., 1319; 1915 C. D., 163; 44 App. D. C., 12.)

In the case from which the last quoted excerpt is taken, the Court of Appeals of the District of Columbia reversed the decisions of the Board of Examiners-in-Chief and Assistant Commissioner, which were based upon a construction of the issue limited to avoid the prior art.

In the case of Monte v. Dunkley (245 O. G., 278; 1917 C. D., 208; 46 App. D. C., 70) the same court affirmed decisions of the three tribunals of the Patent Office refusing to narrow the counts of an interference issue by

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construction. Justice Robb, speaking for the court, said:

> It is a familiar rule that a party will not be permitted to narrow a claim to meet the exigencies of a particular situation. (Kirby v. Clements, C. D., 1915, 163; 216 O. G., 1319; 44 App. D. C., 12; Geltz v. Crozier, C. D., 1909, 313; 140 O. G., 757; 32 App. D. C., 324.)

The decision in the case of Gammeter v. Lister (253 O. G., 259), affirmed by the Court of Appeals, D. C., (253 O. G., 261), furnishes no exception to this rule. In that case no real question of construction was involved as will be apparent from the following words quoted from the Assistant Commissioner's decision:

> But in the case at bar I agree with the contention of Gammeter that these claims cannot be read to cover the device of Lister at all. The only limitations in the claims which give them life are totally meaningless if it be attempted to read them on Lister's structure.

The rule, as set forth in Kirby v. Clements, *supra*, was recognized, that decision being cited, and the case to be decided clearly differentiated therefrom. The rule, as to interferences involving patent applications only, may therefore be said to be clearly established.

It is recognized that a claim in a patent which is broad in terms is sometimes given a limited construction by the Federal Courts in view of the prior art and the intent of the inventor as expressed in his patent specification. The rule of construction thus resorted to for the purpose of sustaining a patent which would be otherwise invalid is not, however, now followed by the Office in determining the scope of a claim which defines the issue in an interference proceeding involving patent applications only; although, as late as January 5, 1909, the Court of Appeals of the District of Columbia, affirmed a decision of the Commissioner of Patents, in a case in which both the court and the Patent Office tribunals applied the usual rules of construction resorted to by the Federal Courts in patent infringement proceedings. (Geltz and Hosack v. Crozier, 140 O. G., 757; 1909 C. D., 313; 32 App. D. C., 324.)

If a claim in an application involved in an interference proceeding is broader in terms than the invention sought to be protected it can be amended. The rules of construction applied by the Federal Courts relate to

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cases in which a patentee is bound by his claim at a time when it is too late to amend. They appear to have no present application to the practice in the Patent Office with respect to cases which do not involve a patent.

Rules of Construction Applicable When a Patent is Involved.

Much might be said in favor of a general application of the rule that claims should be given the broadest construction which they will support, without straining the language in which they are couched, to all interference proceedings, including those in which a patent may be involved. Such general application of the rule would be in accordance with some of the relatively recent decisions. In the case of *ex parte* Cutler (123 O. G., 655; 1906 C. D., 247), the Commissioner held that unexpressed limitations should not be read into a claim in an application to avoid the declaration of an interference between said application and a patent containing a claim expressed in the same words. The following paragraph is quoted from his decision:

> I have had occasion in a previous case to condemn the practice of imposing upon claims by construction meanings which are not clearly set forth by their terms. (Briggs v. Lillie v. Cooke v. Jones and Taylor, C. D., 1905, 168; 116 O. G., 871.) In this Office a claim which is broadly drawn will be broadly read. If a narrow meaning is desired, it must be secured by limitations expressed in the claims. No better method is known for securing the benefits of uniformity and certainty in the construction of claims and at the same time giving effect to the undoubted intention of the parties drawing them than to give invariably to each claim the broadest meaning which can be imposed upon it without violence to the language used therein.

Referring to a claim defining the issue in an interference between an application and a patent, finally decided by the Court of Appeals of the District of Columbia, it was said:

> This claim should be given the broadest interpretation which it will support and we should not strive to import limitations from the specification to meet the exigencies of the particular situation in which the claim may stand at a given time. Although Miel is a patentee, if the terms of his claim do not in their ordinary and natural meaning define his invention according to his intent he may apply for a reissue. (Miel v. Young, 128 O. G., 2532; 1907 C. D., 561; 29 App. D. C., 481.)

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Prior to the decision in the case of Miel v. Young, *supra*, it had been held, in interferences in which a patent was involved, and in which the issue was defined by a claim which had first been presented in the application which resulted in said patent, that the claim, though broad in terms, should be given a limited construction, if necessary, to avoid the prior art, provided such limited construction were consistent with the intent expressed by the patentee in his specification. In the case of Latham v. Force and Parenteau (82 O. G., 1690; 1898 C. D., 32), the Commissioner expressed this rule in the following words:

> The issues are the claims of Force and Parenteau's patent. Their meaning must be determined by consideration of the description on which they are based. Latham, having made these claims after he had seen Force and Parenteau's patent and having drawn them for the purpose of an interference with the patent, must be held to have intended them to have the same meaning which they have in the patent. In other words, Latham must meet Force and Parenteau on their own ground. He is not entitled to put upon the claims of the patent a construction which would render them invalid by reason of what he had done in 1891 if by any reasonable construction they could be held valid as restricted to a specific process not invented by him prior to the filing of the application on which their patent was granted.

The rule, as thus expressed by the Commissioner, in his decision in the case of Latham v. Force and Parenteau, *supra*, was quoted and followed by the Court of Appeals of the District of Columbia in its decision in the case of Tracy et al. v. Leslie (87 O. G., 891; 1899 C. D., 306; 14 App. D. C., 126.) It was again followed by the same court in the case of Ruete v. Elwell (87 O. G., 2119; 1899 C. D., 379; 15 App. D. C., 21), in which it was said:

> The fact that Ruete's specification harmonizes with his interpretation of the issue adds no weight to his contention. The Elwell patent was issued nearly four months before he filed his application. With that before him he prepared it and adopted Elwell's first claim for the apparent purpose of an interference. Having done this, he is not entitled to demand a construction of the claim of the patentee that would render it invalid by reason of that which he himself had accomplished if it can be upheld by any other reasonable interpretation not necessarily inconsistent with the statement of the patentee.

The following quotation is taken from the decision of the same court in the case of Andrews v. Nilson (123 O. G., 1667; 1906 C. D., 717; 27 App. D. C., 451):

> In his decision awarding priority the Examiner of Interferences, however, invoking the rule that the issue must be con-

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strued in the light of Nilson's specification, because that issue is a claim copied from his irregularly-issued patent, holds that the element—"a vibratory strip"—must be limited to one of non-magnetic material, although the claim is for a combination where the vibratory strip has no such expressed limitation.

While we do not question that rule which has often received our approval, we do question the correctness of its application to the case at bar. A claim is, as has been said, "not a nose of wax." While the courts are inclined to liberality in referring back to the specifications for limitations to be placed upon elements of a claim in order to save the claim from invalidity by reason of the prior art, they are not so inclined when the prior art does not require it, nor where an infringer insists that such limitations should be imposed in order to escape a charge of infringement, and this is especially so where the element sought to be limited is claimed broadly in one or more claims, and narrowly, and with such limitations in others. The reasonable presumption is that an inventor intends to protect his invention broadly, and consequently the courts have often said that the scope of a claim should not be restricted beyond the fair and ordinary meaning of the words, save for the purpose of saving it. In reading a claim for the purpose of construing it, heed must not only be paid to the specification proper, and to the drawings, but also to the other claims of the patent. (Ryder v. Schlichter, 126 F. R., 487.) * * * The senior party who has a patent may not be heard to ask that his claim be rewritten so that he may prevail in an interference. He would be in somewhat better position had his patent not been issued, or had he surrendered it for reissue.

In our opinion the claim must be construed as broadly as Nilson made it, and as broadly as the state of the art apparently warrants.

Although the case of Andrews v. Nilson, *supra,* appears to have been relied upon by the Court of Appeals when deciding the case of Miel v. Young, *supra,* the decision in the latter case seemed to clearly indorse the rule that a claim which defines the issue in an interference, even though a patent be involved, should be given the broadest interpretation which it will support. Be that as it may, the recent decisions of the Court of Appeals of the District of Columbia in the cases of Rice v. Schutte (180 O. G., 604; 1912 C. D., 506; 38 App. D. C., 175), Benners v. Richards (189 O. G., 781; 1913 C. D., 347; 39 App. D. C., 553), Leonard v. Horton (189 O. G., 781; 1913 C. D., 348; 39 App. D. C., 458), and Clulee v. Adt (224 O. G., 742; 1916 C. D., 144; 44 App. D. C., 300), clearly revive and re-establish the rule, as announced in the earlier decisions, that a broad claim, which defines the issue in an interference in which a patent is involved, and in which said claim was first presented in the application which resulted in the patent, will be given a limited construction when necessary to avoid the prior art,

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provided such construction is consistent with the disclosure of invention as set forth in the patent specification. In Rice v. Schutte, *supra,* it was said:

> * * * Courts will narrow the construction of a claim where it is necessary to preserve its validity—and in this proceeding we must assume that the issue is patentable—but limitations not called for cannot be read into a claim to save it from destruction. Although the devices of the respective parties are specifically different, they are generically the same. The language of the issue, while broad, we think can be applied specifically.

In the case of Richards v. Benners (187 O. G., 513; 1913 C. D., 36), the Commissioner cited and followed Rice v. Schutte, *supra,* in a decision in which he narrowed an issue first made in a patent for the purpose of avoiding the prior art. This decision was affirmed by a decision of the Court of Appeals of the District of Columbia (Benners v. Richards, *supra*), in which the court said:

> The invention of the improvement in the present invention over the prior art as illustrated by the former patent to Benners, and one to Green, is a narrow one.

Although the Court of Appeals of the District of Columbia, in the case of Leonard v. Horton (189 O. G., 781; 1913 C. D., 348; 39 App. D. C., 458), reversed a decision of the Commissioner (Horton v. Leonard, decided February 27, 1912, not published) based upon a narrowed construction of the issue, under Rice v. Schutte, *supra,* for the purpose of avoiding the prior art, the court did not, thereby, overrule the doctrine announced in its own prior decision. After recognizing the general rule of construction applicable to interferences in which applications only are involved, as follows:

> Where the inventor of a particular device chooses to make claims broader than necessary to cover the same, he cannot, when thrown in interference with another inventor in the same general field, ask that they be limited to correspond with his own particular structure.

the court proceeded to analyze the prior art and ruled that the limitation to avoid the same was unnecessary. In other words, it was the opinion of the court, in that case, that the application of the special rule of Rice v. Schutte, *supra,* relating to interferences in which a patent is involved, was not called for. This statement is

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based upon the following excerpt quoted from the decision of the court:

> The patent to Ash is referred to by the Commissioner as showing the prior art, and it is argued that the claims as construed by the lower tribunals are not patentable over the prior art, but to make them patentable must be given the meaning contended for by Horton. Ash antedates both Leonard and Horton; but he shows one resistance only. He has two levers or arms acting upon the same resistance, while they have two separate resistances of different character. A thing which they undertook to accomplish was to avoid using the same resistance for starting the motor and varying its speed; and each count of the issue specifically recites these two distinct resistances.

Hewlett v. Steinberger (190 O. G., 270; 1913 C. D., 368; 40 App. D. C., 287) is another case involving the construction of the issue of an interference in which a patent was involved. In this case the Court of Appeals of the District of Columbia affirmed a decision of the Commissioner, based upon a broad construction, the decision in the case of Miel v. Young, *supra,* being cited among others as authority. Subsequently, under Section 4915, Revised Statutes, the U. S. Circuit Court of Appeals, Second Circuit (General Electric Co. et al. v. Steinberger, 206 O. G., 1161; 1914 C. D., 255; 214 F. R., 781) was called upon to decide this case on appeal from the District Court, Eastern District of New York. The appellate court found that the description in Steinberger's patent was such as to preclude him from taking advantage of the broad construction relied upon by the Court of Appeals of the District of Columbia. The Circuit Court of Appeals also found that the prior art was undoubtedly such as to require a narrower construction. In other words, the Circuit Court of Appeals appears to have decided this case in accordance with the usual rules of construction relied upon by the Federal Courts generally in cases such as suits for infringement. Nothing is found in the decision to indicate that Rice v. Schutte, *supra,* was considered.

As in the case of Leonard v. Horton, *supra,* the Court of Appeals of the District of Columbia, in its decision in Clulee v. Adt (224 O. G., 742; 1916 C. D., 144; 44 App. D. C., 300) followed its prior decision in Rice v. Schutte, *supra,* by construing the issue of an interference in which a patent was involved, so as to avoid the prior art, but again clearly indicated that the issue must not be so

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narrowed, by construction, further than may be necessary to save it from destruction. After indicating that construction under Rice v. Schutte, *supra,* was necessary in the following words:

> It is conceded that if the language of count 1 of the issue be given the broad construction of which it is naturally susceptible, it will read not only upon the exhibit, but upon other devices disclosed in the prior art.

and had been applied by the various tribunals of the Patent Office:

> the tribunals of the Patent Office, in order to sustain the validity of the counts of the issue, have construed the word "loop" as including this novel feature, defined by them as a return-bend. They, as well as counsel for appellee, rely upon the case of Rice v. Schutte, (C. D., 1912, 506; 180 O. G., 604; 38 App. D. C., 175).

the Court, after discussing the prior decision thus relied upon, ruled:

> But here the first count of the issue is easily readable upon the exhibit of appellant, as well as upon the devices disclosed in the applications of the respective parties, unless the word "loop" be construed as including the limitation that its end be bent either upwardly or downwardly. This additional bend forms no part of the loop, especially in appellee's device, and hence to insert it into the claim would not be the mere construing of it, but the reading into the claim of a limitation not called for to save it from destruction. We are, therefore, of the opinion that appellant's exhibit answers the requirements of the issue as defined in count 1, and that appellant is entitled to an award of priority on this count.

Conclusion.

From the foregoing analysis of the decisions it appears that the following rules of interpretation and construction, for determining the meaning and scope of claims which define the issue of an interference proceeding in the United States Patent Office, have been established:

If a claim which defines the issue of an interference proceeding in the Patent Office is expressed in doubtful and uncertain terms, and the defect cannot be cured by amendment, either because of the limitations of the language in which it must be expressed, or because one of the parties to the interference is a patentee, a meaning should be adopted in its interpretation which is consistent with the disclosure of invention in the application in which the claim was first made.

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If an interference proceeding in the Patent Office involves applications for patents only, as distinguished from such a proceeding in which a patent is involved, the claim which defines the invention in issue should be given the broadest construction possible without violence to the language in which it is expressed.

When an interference proceeding in the Patent Office involves a patent, and the claim which defines the issue was first presented in the application which resulted in said patent, the claim, though expressed in broad terms, should be given a limited construction, when necessary to avoid the prior art, provided such limited construction is consistent with the intent of the inventor as expressed in the patent specification.

The foregoing discussion is not submitted as an exhaustive treatment of the decisions bearing upon the subject involved. Nor is the same intended as in any manner exhaustive as to all phases of construction of the issue of a patent interference. For example, the rule that no material element of the issue may be disregarded has not been touched upon. An attempt has merely been made to show that the meaning of the terms in which an issue is expressed and the construction of the issue are not one and the same thing; that the construction of the issue of an interference in which a patent is involved is determined by somewhat different rules from those which control when the interference involves applications only; that the construction of the issue of a patent interference is subject to rules which differ from those applied by the Federal Courts in deciding suits for infringement; and that there appears to be a logical reason for such differences. A statement that the decisions bearing upon these several points are entirely uniform and consistent would not be warranted. Their general trend, however, is believed to be in accordance with the conclusions herein expressed.

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AGE OF PRODUCTION IN INVENTION AND OTHER FIELDS.*

BY WM. I. WYMAN.

Genius has been defined as the ability to take great pains, while the common conception of this quality is facility of accomplishment without undue excess of effort. Probably the truth is an aggregate of these apparently contradictory ideas. In examining the achievements of men of transcendent note it is to be observed that in most cases, especially in scientific and artistic endeavors, they gave very early in life decided manifestations of unusual brilliancy. The consciousness of superior powers is naturally accompanied by a driving desire to give them expression, and thus we often see in the same individual powers of acutest imagination and quickest comprehension coupled with tireless energy and mastery of endless detail. Napoleon was quick to see and almost as quick to act, but he worked longer and more intensely than any of his compeers. Mozart and Raphael, highly precocious, whose arts came to them with excessive ease, left a prodigious heritage of their drudgery in the very short time they lived, while the enormous output of super-men like Newton, the scientist, Shakespeare, the dramatist, Balzac, the novelist, Rubens, the painter, and Wagner, the composer, and Leonardi de Vinci, Michael Angelo and Goethe, universal geniuses, testified to their absorption in their work as well as to their brilliancy of accomplishment.

In reviewing the careers of the more brilliant inventors we find that they gave evidence early in life of a decided bent towards mechanics or applied science and that their capacity for drudgerous detail and extended, intense effort was the common hall-mark of their tribe. We do not find here such unusual outbursts of precocity as frequently distinguish the tender age of the mathematical or musical genius. Almost always the great masters of music or pure science have been youthful prodigies. Mozart composed at 5, Handel at 11, while

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Beethoven was second court organist at 14. Pascal at 16 wrote an original treatise on conic sections, Lagrange at 19 wrote a paper which would have immortalized the maturest mathematician, and Laplace established his primacy in the scientific world before he was 21. Henry Smith, the great English mathematician, taught himself Greek as a child of four, while Clerk Maxwell intelligently (!) investigated the mysteries of bell-wiring at the somewhat less mature age of three.

Gauss and Euler established an international reputation in pioneer mathematical endeavor in their teens, while the youth of Sir Wm. R. Hamilton, the inventor of quaternions, was one brilliant accomplishment after another, his career being a vivid illustration of genius let loose. At 13 he had a good knowledge of a dozen languages; at 15 mastered all the mathematics the universities had to offer, and at 22 he published his abstruse "Theory of Systems of Rays." Arago, before he was 25 was a professor of mathematics, a profound delver into physical problems and a brilliant lecturer of European renown; Davy's scientific contributions were so weighty when he was a boy that he was appointed when he was but 22 a lecturer to the Royal Institution, and while still in his twenties made the most valuable contributions up to that time ever offered in physical chemistry; and Galileo, while only 18, discovered the laws of the pendulum, and, while yet at the age when boys now pursue their professional courses, discovered and demonstrated one of the fundamental laws of physics—the relation between space and time in a falling body. And most striking of all, the theory of fluxions or calculus, much the greatest advance in mathematics in modern times, and the law of gravitation, unquestionably the profoundest of all scientific generalizations, were discovered by Newton, the supreme intellect of the ages, before he was 25.

But serviceable invention calls for some exercise of the maturer faculties. Imagination and inspiration may ripen exceedingly early in life, but invention, while depending in great measure upon these qualities, has also close relation to the practical, to things which require experience and passage of years to absorb and appreciate. So it is entirely natural that many of the great-

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est inventions were introduced when their authors were fairly well along in years, but what is more remarkable was the youthfulness of the creators of a great many of the most important and revolutionary inventions at the time of introduction. Perkin invented the first aniline dye at 18—thus a mere boy laid the foundations of the immense coal-tar industry; McCormick was a youth of 22 when he made his first reaper, whose importance as an industrial factor is scarcely overshadowed by any other invention since the steam-engine; Westinghouse and Marconi about reached their majority when their original creations were first published to the world, and what wireless is or the air-brake has done is to record the high-water mark in inventive progress; the thermo-electrolytic reduction of aluminum was simultaneously discovered by Hall in this country and Heroult in France, both at the age of 23, and these two young men, just one remove from boyhood, gave to industry a new useful metal, which bids fair to rank next to copper in commercial importance; and only two years later, at 25, Heroult perfected the first serviceable commercial electric-furnace, whose transcendent importance as a factor in fundamental industrial operations we are only beginning to realize.

If we were to take an excursion into the realms of the disputable and risk making up a list of the twenty greatest primary inventions of modern times, we would present the following table: (chronologically arranged).

Title.	Age of Inventor time of introduction	Title.	Age of Inventor time of introduction
Steam Engine	29	Dynamo	44
Cotton Gin	27	Air Brake	22
Photography	40	Telephone	29
Reaper	22	Incandescent Lamp	32
Telegraph	46	Gas Engine	37
Vulcanization (Rubber)	39	Steam Turbine	29
Sewing Machine	26	Aluminum (Hall-Heroult)	23
Bessemer Process	42	Induction Motor	31
First Coal-tar product	18	Wireless Telegraphy	22
Regenerative Furnace (Fred. & W. Siemens)	30-34	Aeroplane (Wright Bros.)	34-38

There can be no question that all of these inventions are pioneer and invested with historical importance, and whether or not a better list can be prepared, it is safe to

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draw conclusions from the table presented. We find the average age of production about 32, at an age when extremely few men, by and large, have made their mark. Half of these contributions, all of epoch-making character, having a revolutionary or unusually stimulating effect on some industry or creating some new and important art, were made before their progenitors reached 30, while only four, or 20%, were contributed by men over 40.

If we enlarge the list and include inventions of inferior importance only to what has already been listed by adding the spinning-jenney (at 25), ether as an anasthetic (27), first synthetic product (28) the phonograph (30), carbon-zinc electric cell (30), linotype (30), steam hammer (30), opthalmoscope (30), electric-welding (33), first modern locomotive (33), dynamite (34), electric-steel (35), cotton-spinning machine (36), hot-air blast for metallurgical furnaces (36), safety lamp (37), Fulton's Clermont (42), Bunsen burner (44), kinetoscope (46), X-ray (50), and the Jacquard loom (51), the average age is advanced to about 33.5. If the list is still further enlarged to include about 40 additional but slightly less prominent inventions, the average age of production moves up almost two years to 35.3. Allowing every reasonable latitude of choice and confining our list of greatest inventions to twenty-five as data for judgment, we have no reason to alter the conclusion derived from a study of the first table. Of achievements in applied science of the very first order, those of historical and vital importance, more were invented before 33 than after, and exceptionally few were created after their sponsors had reached their prime. From 27 to 36 appears to be the most active and most ingenious years of the greatest inventors, the lower thirties showing the peak of inventive effort. The young man came into his own at this time of life with the acceleration of electrical development from 1880 to 1890. Edison, Brush and Thomson were about 30 when they undertook the pioneer task of utilizing electricity in generation, transmission and lighting, and Sprague was scarcely that age when he installed the first modern trolley system in Richmond, while Wm. Stanley was considerably younger than that when he first wrestled with the problems connected with utilizing alternating current and Tesla just over the line

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when his induction motor made practical the generation and transmission of high tension and polyphase currents.

Atrophy of the creative powers by no means exerts its baneful touch after the Oslerian forty years have arrived. Some mighty big advances were made in the industrial arts by men in the forties—notably the Bessemer process, the telegraph, gasoline engine, the kinetoscope, electroplating, voltaic pile, siphon recorder and the Daniell call. But the half-century mark seems to define the limit of inspirational endeavor. Bunsen invented a vapor calorimeter at 76, and M. G. Farmer was active beyond 60 as is Edison today, but Harvey's process of hardening armor plate, when he was 67, is the only instance the writer has been able to find of a primary invention of large industrial or social importance that was given to the world beyond touching distance of that age. Inventive genius, while flickering out then, does so with a strong dying gasp, for at 50 or 51 were invented the gasoline engine, the X-ray machine, the Jacquard loom, and the modern mariner's compass.

It is interesting to compare the age of achievement of inventors with those of men made famous in other walks of life. As already noted, the genius of great mathematicians and musicians almost universally breaks out at an extremely tender age. Child wonders are by no means scarce among the notabilities in other vocations. Jonathan Edwards at 10 wrote a paper on the immateriality of the soul; Goethe at eight knew something of Latin, Greek, French and Italian and presumably was master of his own difficult tongue; Milton at 15 composed excellent Latin verse; and Alexander Hamilton at 13 wrote letters creditable to one of matured mind; while before he arrived at 17 Raphael's work was indistinguishable in quality from the leading exponent of the greatest art school of the time. Of the great conquers of history four stand out in startlingly splendid isolation. Alexander was master of the world at 25, Hannibal at 26 was commander-in-chief of the Carthaginian army and Napoleon proved himself the greatest general of modern times at 27. Caesar was forty before he was permitted to find opportunity to display his terrible aptness for war and was the only one of the quartette who was beyond the influence of boyhood when he made his mili-

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tary mark. And yet Moltke, the greatest military strategist of our time, remained in comparative obscurity until he was 66 and did not take his place among the great historical figures until the Franco-Prussian war at a time when the psalmists allotment of three score and ten had expired. As a rule, however, men of action and men of affairs do not come to years most fruitful of fame until they are well above 40 because the time spent in apprenticeship and service and step-by-step progress through a number of competitive grades are such large factors in determining their position. Statesmen, financiers and captains-of-industry are frequently men who may be called old and often great military and naval engagements have been conducted by men some distance beyond their prime. In fact it is an exception when a statesman or financier has acquired fame in his early manhood. The highest flights of the imagination, the acutest insights into scientific truths and the most dazzling of military operations have often been the products of comparative immaturity, but the more humdrum activities in the affairs of state or in the conduct of trade and finance require leadership of tested experience. It is this fact which makes the records of Wm. Pitt and Alexander Hamilton (one in becoming prime-minister of England at 24 and the other in being the colonies leading financial authority at the same age) so extraordinary —not in the inherent brilliancy of their performances, but in the extreme rarity of instances of that kind.

Even in the realm of speculative thought do we often find examples of early productiveness. We do not naturally look for youthful leadership in the domain of those intellectual exercises which we usually find dependent upon the extended observation, experiences and ruminations of a matured existence. And yet before Berkeley or Hume reached 27, they had developed their respective philosophies, became the founders of distinct schools of metaphysics, and exercised a tremendous influence on subsequent abstruse thought. While he was yet a boy, John Ruskin wrote his revolutionary "Modern Painters" and before he passed 30 years gave to the world his "Seven Lamps of Architecture," the greatest classic in its field. Before 30, Spinoza had evolved and published some of his profound speculations, and Kant,

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John Stuart Mill, and Adam Smith were active in lines involving the highest intellectual flights.

Inventors, being partly men of science, partly men of imagination and to a great extent men of affairs do not leave a record of precocity of the first class or mature so late as the last. Their records are comparable to a great degree to those of noted writers, men of the creative type and of artistic perception. Thus Milton wrote Comus at 26 and completed Paradise Lost, his last great work, at 57. Shakespeare wrote his first great poem at 29 and died at 52. Thackeray published his "Vanity Fair" at 35 and reached the height of his powers with his "Newcomes" at 43, and Dickens acquired fame at 24 by his "Pickwick Papers," reached his high-water mark at 38 with his "David Copperfield," and exhausted his genius not long after 50. Examples like this could be multiplied *ad libitum,* although it is curious to note a rare departure in DuMaurier and DeMorgan, both of whom took their first fling at novel writing when they were past their prime—one at 57 and the other at 67—and achieved success and fame in the attempt. Our most famous inventor, Edison, invented the stock-ticker at 24, the phonograph at 30, incandescent lamp at 32, devised the first central station system at 35, and invented the kinetoscope at 46—a record of achievement comparable to the activity of the most noted authors in the parallel field of literature.

A Table of Important Inventions.

Inventor	Age	Invention.	Date Patented, Operated or Disclosed.
Perkin	18	Aniline dye	1856
Siemens, Wm.	20	Steam Engine Governor	1843
Bessemer	21	Electroplating lead with Copper	1813
Colt	21	Revolver	1835
Marconi	21	Wireless (first patent)	1896
Westinghouse	22	Air-brake	1868
McCormick	22	First Reaper built	1831
Hall	23	Aluminum Reduction	1886
Heroult	23	Aluminum Reduction	1886
Edison	24	Stock Ticker	1871
Crompton	25	Spinning Jenney	1778
McCormick	25	Reaper, (first patented)	1834
Marconi	25	Wireless (successful operation)	1900
Howe	26	Sewing Machine	1845
Whitney	27	Cotton Gin	1792

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Inventor	Age	Invention.	Date Patented, Operated or Disclosed.
Davy	27	Voltaic Arc	1805
Ericson	27	Steam Fire Engine	1830
Dr. Morton	27	Ether as Anasthetic	1846
Edison	27	Quadruplex Telegraph	1874
Brush	27	Dynamo and Arc Lamp	1876
Wellsbach	27	Gas Burner	1885
Wohler	28	Synthetic Organic Compound	1828
Watt	29	Steam Engine (successful operation)	1765
Whitworth	29	Planer	1832
Farmer	29	Electric Cooker	1849
Bell	29	Telephone	1876
Parsons	29	First Steam Turbine Produced	1884
Nasmyth	30	Steam Hammer	1838
Bunsen	30	Carbon Zinc Cell	1841
Siemens, Fred.	30	First Regenerative Furnace Patent	1856
Edison	30	Phonograph	1877
Helmholtz	30	Opthalmoscope	
Mergenthaler	30	First Lynotype	1884
Farmer	31	Electric Fire Alarm Telegraph	1851
Tesla	31	Polyphase Current Motor	1888
Edison	32	Carbon Filament	1879
Stephenson	33	His First Locomotive	1814
Thomson, Elihu	33	Electric Welding	1886
Siemens, Wm.	34	First Regenerative Furnace Patent	1857
Otto	34	First Successful Gas Engine	1866
Nobel	34	Dynamite	1867
Eastman	34	Kodak Camera	1888
Wright, O.	34	Aeroplane	1905
Edison	35	Central Station Distribution	1882
Heroult	35	Electric Steel	1898
Acheson	35	Carborundum	1891
Arkwright	36	Cotton Spinning Machine	1768
Fulton	36	Submarine	1801
Neilson	36	Hot Air Blast	1828
Mergenthaler	36	First Successful Linotype	1890
Davy	37	Safety Lamp	1815
Wright, W.	38	Aeroplane	1905
Watt	38	Steam Engine Perfected	1774
Siemens, Wm.	38	Regenerative Furnace Perfected	1861
McKay	39	Shoe Sewing Machine	1860
Goodyear	39	Vulcanization of Rubber	1839
Gayley	39	Hot Air Dry Blast	1894
Diesel	39	Internal Combustion Motor	1897
Daguerre	40	Photography	1829
Westinghouse	40	Quick Acting Brake	1886
Acheson	40	Artificial Graphite	1896
Bessemer	42	Convertor	1855
Fulton	42	Steamboat	1807
Cort	44	Reverbatory Puddling Furnace	1784
Brugnatelli	44	Electroplating	1805
Bunsen	44	Burner	1855
Siemens, Wm.	44	Dynamo (With Werner Siemens)	1867
Siemens, Wm.	44	Open Hearth Process	1867
Otto	44	Finished Gas Engine	1876
Taylor	44	High Speed Steel	1900
Stephenson	45	First Successful Locomotive Operated	1826

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Inventor	Age	Invention.	Date Patented, Operated or Disclosed.
Daniell	46	Battery Cell	1836
Morse	46	Telegraph	1837
Edison	46	Kinetoscope	1893
Volta	47	Voltaic Pile	1792
Kelvin, Lord	50	Mariners Compass, Modern	about 1874
Daimler	50	Gasolene Engine	1884
Roentgen	50	X-Ray Machine	1895
Siemens, Werner	51	Dynamo (with Wm. Siemens)	*1867
Jacquard	51	Loom	1801
Ericson	52	Hot Air Engine	1855
Daimler	52	Gasolene Vehicle	1886
Morse	53	Telegraphy Publicly Demonstrated	1844
Ericson	60	Monitor	1863
Harvey	67	Harveyized Steel	1891

PATENTS—A BUSINESS BAROMETER.

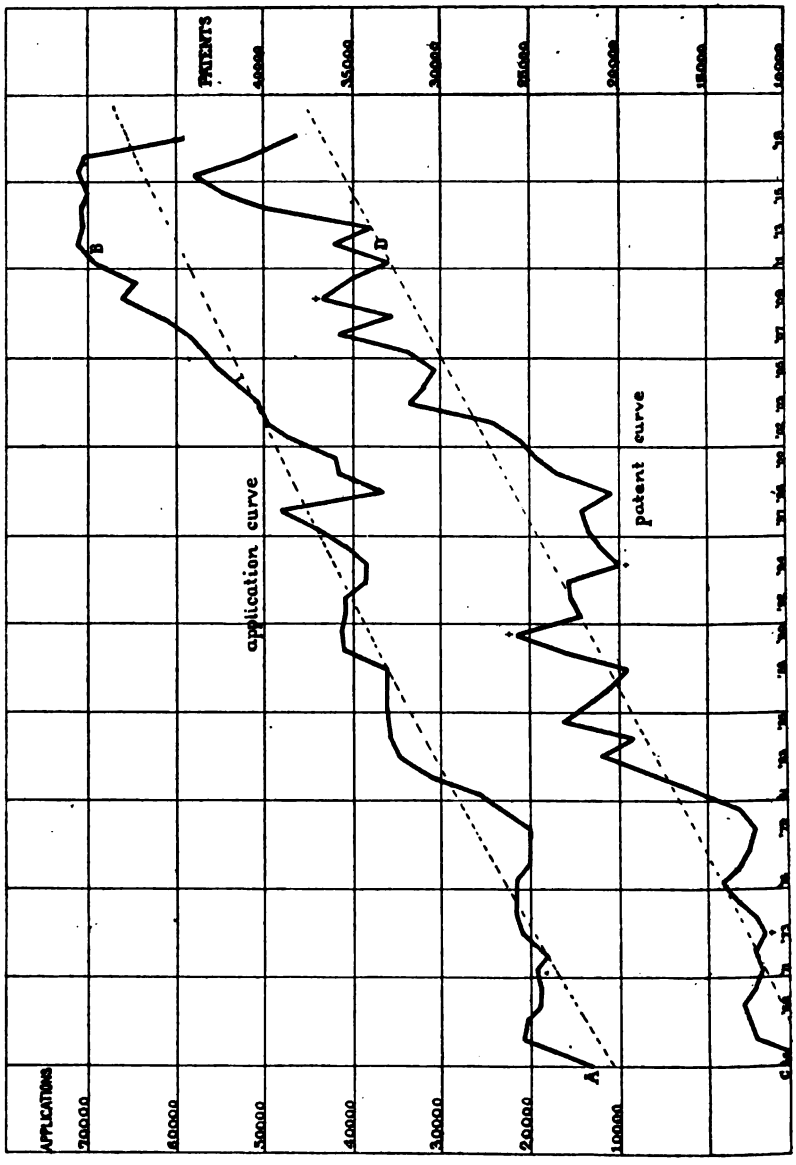
JOHN BOYLE, JR.

It is a well recognized principle among students of trade conditions, that business moves in cycles; that eras of prosperity and depression succeed each other. These cycles are of two kinds; first, major cycles, broad and irregular, taking a period of about twenty years to complete; second, minor cycles, which constitute the irregularities of the major cycle and taking only a few years to complete. Graphically, these cycles would be represented by an undulatory curve having smaller undulations, the main undulations representing the major cycles and the small undulations, the minor cycles. The high points of a cycle represent times of great industrial activity; the low points represent periods of business depression.

Jevons, the English economist, pointed out the occurrence of these business cycles in England since the beginning of the 18th century and attempted to show a connection between them and the periodicity of sun spots.

These changes in the conditions of business are reflected in certain related factors such as railway earnings, immigration, bank clearings, stock prices, etc., some of which are more sensitive or responsive to changing conditions than others. Recognizing the general principles of the business cycle, some students attempt to predict

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the probable changes in business and the corresponding changes in the related factors.

That there is a close relationship between business activity and activity in patents, and that patents tend to follow the business cycle is not fully recognized, and the proof of it may be interesting. Curiously enough, too, it is patents granted and not applications for patents which are the most sensitive to changing business conditions and which follow the business cycle most closely.

The accompanying chart shows a plot for applications for patents and for patents granted since 1865. The figures are taken from the annual report of the Commissioner of Patents to Congress. The upper curve represents applications for patents and reissues and the lower one represents patents granted excluding reissues. The dotted lines represent what might be called the lines of normal increase. It will be obvious from an inspection of these curves that the curve representing patents is more symmetrical than the curve representing applications. Particular attention will, therefore, be directed to the patent curve. The following points should be noted about this curve. It crosses the dotted line about every ten years, viz.: 1872, 1882, 1892, and 1902. The highest point in the last half of the first cycle is 1869; in the last half of the second cycle is 1890, twenty-one years thereafter; in the last half of the third cycle is 1909, nineteen years thereafter. In each of these years was granted a greater number of patents than had ever been granted before in any one year. The lowest point in the first half of the second cycle is 1873; the lowest point in the first half of the third cycle is 1894, twenty-one years thereafter. The crosses on the plot indicate the high and low points. This would seem to show that patents granted move in about a twenty year cycle.

A review of the industrial history of this country will show that there were very serious business depressions in 1873 and in 1893; and that in 1884, 1890, 1903 and 1907, business was at a low ebb, although these crises were not so far reaching in their effects as the first two. As shown by the patent curve, the effect on the issue of patents during these periods was proportional to the intensity of the business crisis.

It would seem to be clear, then, that not only is there a patent cycle, but that it is practically the same as the

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business cycle. Many different causes operate to produce this similarity. Every line of human endeavor is represented in patents. During prosperous times, the tendency is to take up new ideas and to enter new fields of business. Inventors and corporations interested in inventions rush to a conclusion, applications which may have been pending for some time in the Patent Office. They immediately pay the final fee and take the patent out. During a period of depression, the opposite tendency manifests itself. Applications that are already filed are kept alive in the Office by taking advantage of the technical procedure and are kept there until such time as they are most valuable, which, of course, would be in an era of prosperity. This probably would serve to explain why the patent curve is so much more sensitive to business changes than is the application curve.

Turning now to the application curve, it will be noticed that the crises of '73 and '93 produced an appreciable effect on the same, whereas those of '84, '90, '03 and '07 produced hardly any. The explanation of this peculiarity requires the introduction of a new factor into the case, the patent solicitor. During a period of prosperity, on account of the great number of new inventions demanding their attention, attorneys will probably be unable to keep their work current. When a reaction sets in and their business begins to slow down, they take advantage of the situation to bring their work up to date. If the reaction is short lived, no appreciable decrease will be shown in the number of applications filed. When the reaction covers a long period, this equalizing feature disappears in time and the number of applications filed becomes truly indicative of the condition of business. Many other causes might be suggested to explain the variations in these curves.

At the time of the discovery in 1913* of this close relationship existing between the granting of patents and business activity, we were then approaching the end of one of the business cycles. It was confidently predicted at that time by students of fundamental conditions that we were due for a period of business depression, in which case the patent curve would have been expected to drop

*See The Magazine of Wall Street, Vol. 12, No. 2.

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below the dotted line. But just as the war produced an unparalleled and artificial activity in business, so too did it produce a similar condition in the issuing of patents. As might have been expected, however, in the light of previous experience, the immediate effect on the filing of applications has not been very marked.

It should be remembered that inasmuch as patents are the creatures of statute, any radical revision of the patent laws or any radical change in the rules of practice in the Patent Office, might produce changes in the curves that could not be foretold. In fact, perhaps some of the unexplained variations in the curves could be attributed to some change of policy on the part of the Patent Office.

INVENTIONS IN FRANCE.

In an article in *Les Annales,* commenting on the tendency of the French to become victims of routine and not disposed to undertake new ventures, Paul Gaultier, Professor of Economics at the Sorbonne, and one of the leading French writers on current topics, voices the following interesting sentiments on the status of inventions in that country:

"France is indeed not a paradise for inventors. Not that France itself does not invent; it invents more than any other country in the world. But it makes no use of its own inventions. It does not use them because of the stubbornness of the people. In order that an invention should have any chance of being adopted by us, it must come back to us from abroad. The list would be a long one of all the discoveries which, born in France, came back to us after a long detour. We only begin to exploit an invention after we have become accustomed to it. There is no inventor of consequence, who in the beginning has not found everybody at home combined against him. That there should still be any inventors among us is an indication of how powerful French genius must be. If any one should discover a way of changing stones into gold, no one would even consider it. Manufacturers and financiers would turn down the proposition and the newspapers would ridicule it. And if the inventor

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should start to make a little noise about it, the guardians of our traditions would unite in condemning him. Repulsed everywhere, scorned and baffled, the inventor receives only injuries and misery, to such an extent are new things taboo among us.

"Just think of it! The extent to which some new thing might derange our habits and established customs."

To the Editor:

I have been intensely interested in the appearance each month of the JOURNAL OF THE PATENT OFFICE SOCIETY and I find it a most profitable procedure to carefully digest each page. It appears to me that it is a perfect God-send to the Industrial activities of the country, making for a clear understanding of the patent provision of the Constitution.

The article in the November number of the JOURNAL by Examiner Lightfoot has impelled me to get my file, labeled "PATENT OFFICE EXPANSION," into shape so as to formulate a few ideas along that line. These I have embodied in a brief "paper" which I am enclosing for the use of the Society, in any way that may be deemed desirable.

I am convinced, in view of the correspondence that I have had with different Congressmen and the interviews I have had with the Chairmen of the Patent Committees of both Houses, and the interview with Vice President Marshall, relating to the needs of the Patent Office, that outside pressure must be brought to bear on the members of Congress from the "folks back home" to induce them to in some way atone for the awful neglect of which they are guilty.

The suggestions I have volunteered to make are also based on a personal survey I made of the Patent Office Building on May 15 and 16, 1918. I do not claim originality for all of the suggestions. Some of them must necessarily overlap just as important conceptions made by others.

With best wishes for the Society and kindest personal regards, I beg to remain,

Very truly yours,

N. S. AMSTUTZ,
Research Engineer.

Valparaiso, Ind.

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NEEDS OF THE PATENT OFFICE.

Some of the urgent needs of the Patent Office appear to be as follows:

1st. An increase of staff to meet the increase of business submitted to the Office and combat the expanding area of search that such increase of business inevitably produces.

2d. An increase of equipment commensurate with the ever expanding activities of the Office.

3d. A radical increase of compensation for the staff, at least as large as that found necessary in carrying forward the Industries of the country, through skilled assistants of the same order of qualification as is demanded by the Patent System.

4th. An annual study period, of at least one month, preferably three months, for each principal Examiner and Assistant Examiner, under full pay and reasonable expenses, while directed by the Commissioner as to available periods, etc., conditioned on a full time study of the *practical phases* of the Industries of the same subjects allotted to them in their official capacity as Examiners. That a formal report of such observations be made and filed in the Division archives for reference.

5th. The establishing of a complete fire-proof laboratory in the Patent Office building, for making physical, chemical, mechanical and electrical qualitative tests. The laboratory to be supplied with a full complement of accessories, self-recording devices, etc., in charge of a staff of assistants, comprising a physicist in each branch, a general mechanician, etc. So that any questions arising in the course of prosecutions as to the actual performance of processes or mechanisms could be answered by authoritative tests made without going outside of the Office. In this way definite results would be secured under the proper surroundings, as to privacy, conformable to the secrecy of the Office Archives. The findings in every case to be made the subject of a formal report to become a part of the file to which it relates.

6th. The installation of an automatic system of ventilation to insure the proper amount of air for each occupant, adequately humidified and cleaned.

7th. The inauguration of a more thorough system of hygiene and sanitation, coöperative with item 6.

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8th. An arrangement of quarters, probably impossible in the present building, giving each principal Examiner and each first and second assistant a private room with a stenographer's room entirely separate, so as to surround these highly skilled men with the same kind of environment as is supplied as a matter of course in the Industries and the Professions.

9th. Arrange a plan for a carefully coördinated study department, in the law, physics, mathematics, the practical sciences, equivalent structures, etc., etc., for all under assistants. This feature to be made obligatory so as to form a standard system of instruction within the Office from which to develop qualifications on which staff can depend for recruits.

10th. Form a Board on Standards of Practice so as to secure uniformity of procedure among the different Divisions and the Attorneys practicing before the Office.

THE "PATENT SYSTEM."

In Its Relation to the Ethics of Industrial Service.

Does it reflect a general business obloquy or merely handicapped professional ethics? As a factor of social activity is it any more deserving of harsh criticism than the ethical system of other vocations?

The patent profession should be considered as an activity of specific public service, differing as to the letter but not as to the spirit from the medical and theological professions or any other branches of service now desiring the appellation of "profession." Patent practitioners are but a part of a social system according to which some people desire the grant of a governmental monopoly to their individual advantage. These people wish to have a special benefit emanate from their inventive judgment. The patent lawyer is obligated to serve them to the end of procuring, in cases where justly entitled, such legalized monopoly of broadest proper scope.

A physician is obligated to mitigate pain and cure, if possible. None wishes his immediate consideration to be "why have you this pain?" or "do you think it is a good thing to have?" He simply gives you credit for

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the reasonableness of your conclusions and proceeds to prescribe accordingly.

A theologian is obligated to soothe with a revivification of faith. He is so gratified at the knowledge of your signifying the need of it that he does not presume to ask why you think you need it. He, on his part, simply assumes you should or actually do need it, and ministers accordingly.

It is not for the patent lawyer even conscientiously to disparage and condemn. To do both of these at times, when absolutely certain of being well informed by data furnished through previous experience, may be justifiable. When this is done it reduces the income. It is well known how many shysters there are in the legal profession. It may be less often realized that there is an equal percentage of "unprincipled persons" in other professions. It is true that some persons prey upon the cupidity or inferior judgment of others. How to exclude this class from professional practice is truly a problem. Perhaps a fixed scale of charges or standardized fees for specific service would lessen the evil.

Every business presents, however, a similar problem. The manufacturing business in which any reader of this article chances to be engaged also involves sharp practices, discreditable dealing and all too often a heartless inconsiderateness of labor—of the daily wage-earner who, if he is not the sole producer, is certainly a big producer with a soul.

With specific reference to the manufacturing business, or code of business ethics, I ask:

Does the manufacturer inquire into the commercial merits (salability) of articles submitted to him for production? NO! This is so not merely because he cannot afford to do so, but also because he ought not to presume to be all-knowing in this regard. It may be true that he could judge aright in the great majority of cases and as often magnanimously disparage and discourage. It is, however, convincingly not his duty to do so. It is not even proper, for in doing so he foists his judgment upon an individual likely to place reliance thereon. His judgment must occasionally be incorrect and irreparable damage, however small, ensue in consequence. Quite incidentally, such procedure would be woefully poor business and insure the family of him who practiced it few

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worldly goods and comforts. The majority of competitors will never follow suit.

Now this last:

Let us assume that a patent solicitor today procured a patent upon an article which in a certain manufacturer's disinterested opinion should be pronounced a worthless idea, a useless contribution to inventive and industrial progress. Tomorrow this patentee just chances to come to this same manufacturer with the request that he manufacture the same article. Is not the manufacturer's disinterested opinion at once a nullity? Does he tell the patentee what he would have had the solicitor tell him? INDEED NOT, nor does anyone else. The manufacturer would be right in saying: "That's none of my business"—and there you are.

It just simmers down to this:

A manufacturer is not a benign industrial expert in the service of a suspicious and ungrateful public. A patent lawyer is not a general industrial adviser.

All of us should concentrate, specialize and strive intensively to know a little of everything and everything of one thing, and then advise others only in respect to that about which they seek advice of us in our individual capacity as experts, not in respect to extraneous phases.

Indulgently submitted for earnest reflection,

CURT B. MUELLER.

CHAMBER OF COMMERCE, STATE OF NEW YORK.

Mr. E. J. Prindle, who is Secretary of the Patent Office Committee of the National Research Council and who has recently been elected Chairman of the Patent Committee of the American Chemical Society, reports that, through the efficient efforts of Mr. Welding Ring, Chairman of the Executive Committee of the New York State Chamber of Commerce, the chamber referred to adopted, at its meeting on May 1, the following resolution:

> "RESOLVED, That the Chamber of Commerce of the State of New York favors the enactment of legislation by Congress, in line with the report of the National Research Council, that will increase the efficiency of the Patent Office in the handling of all matters pertaining to inventions and patents, facilitating quick and more thorough research, prompt determination of the rights of inventors, and avoidance of unnecessary litigation in the courts."

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PATENT OFFICE GREETS ITS RETURNED FIGHTERS.

More than 1,000 officials and employees of the Patent Office and friends on the evening of April 28, welcomed home the men who left that Office to enter the military and naval service of Uncle Sam, at the Patent Office building. The large rotunda on the second floor was hardly adequate to care for the large throng.

A large service flag bearing one star and "170" in large numerals hung from the center of the ceiling, while another flag bore nine gold stars as mute evidence of "the men who will not return." The program included an entertainment, dancing and refreshments.

Sidney F. Smith, principal examiner of patents, presided. Speakers were Rear Admiral J. S. McKean, U. S. N.; James T. Newton, Commissioner of Patents; Capt. Elmer Stewart and Capt. Howard W. Hodgkins, formerly employed in the Office. Miss Ada L. Townsend gave a patriotic recitation and the Department of the Interior Orchestra played.

During the evening the male chorus of the Office sang. Members are Charles H. Allen, G. C. Callan, Charles H. Shaffer, A. J. McFadyen, Thomas Mead, G. A. Lovett, G. P. Tucker, W. B. Magruder, J. H. Giles and W. J. Friess.

The committee in charge of arrangements included Sidney F. Smith, chairman; W. J. Rich, J. H. Lightfoot, W. B. Magruder, J. J. Darby, Capt. W. W. Burns, Miss Mary L. Goddard, Miss Fannie Moore, Miss Nellie Ross and Miss Dorothy Weeks.—*The Evening Star*, April 29.

WEEKLY NEW YORK PATENT ATTORNEY LUNCH.

Patent attorneys meet each Friday for lunch, down stairs at Stewart's, 28 Park Place (near the Woolworth Building).

Patent Office men and attorneys are invited when in New York to have lunch and meet friends there.

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CAN THE PATENT OFFICE COMPETE WITH THIS?

The United States Civil Service Commission has announced an open competitive examination to be held May 20, 1919, for the following positions in the Patents Section, Purchase Branch of the Purchase, Storage and Traffic Division, War Department, at the salaries indicated:

Patent Investigator,	$1200-$1800
Expert Patent Investigator,	$1800-$2400
Patent Specification Writer and Prosecutor,	$1500-$2400
Technical Patent Expert,	$2400-$3600
Patent Draftsman,	$1200-$1800

The competitors will be rated upon their sworn statement in their application and upon corroborative evidence deduced by the Commission. The qualifications required for these positions are in substance respectively as follows:

Patent Investigator:—A four years high-school course and one year of a technical course in a college or university of recognized standing, or have been employed at least a year in which they acquired a knowledge of technics; they must have had at least two years experience in Patent Office "searching."

Expert Patent Investigator:—A four years high-school course, two years of a technical course in a college or university or two years technical experience in a mechanical, electrical or chemical industry; they must also have had at least three years experience in preliminary examination of inventions and in validity and infringement searches in the Patent Office, and must be familiar with the laws concerning transfer of rights under patents, recording of assignments, and with Patent Office records. A knowledge of French and German is desirable.

Patent Specification Writer and Prosecutor:—Graduate of a college, univesrity or technical school and one year's experience in patent specification writing and prosecuting patent applications.

Technical Patent Expert:—Graduate from a technical course in a college or university and graduate in law or have been admitted to the bar; they must have had at least four years experience in patent work including va-

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lidity and infringement searches, preparation and prosecution of patent applications, conducting of interferences and general patent work.

Patent Office Draftsman:—A good common school education and six months' work in a school of drafting, or two years' drafting experience. Applicants must submit a drawing and a tracing thereof complying with the requirements of the Patent Office in regard to style and details.

A reading of these requirements shows that any assistant examiner who has been in the Office two years, is qualified for the position of patent investigator, with three years' experience would be qualified for the position of expert patent investigator, and with four years' experience in the Office, except possibly for the required experience in preparing and prosecuting patent applications, would be qualified for the position of technical patent expert. The Patent Office draftsmen are clearly qualified for the position of patent draftsman.

A comparison of the salaries offered for these positions with the salaries the assistant examiners and Patent Office draftsmen qualified for the positions are now getting is distinctly unfavorable to the Patent Office. Nearly all the third assistant examiners should be qualified for the position of expert patent investigator, and all the second assistants, first assistants, principal examiners, law examiners and the chief clerk have had a training, qualifying them for the position of technical patent expert, except, as above stated, for the required experience in patent application preparation.

If the War Department considers the technical work specified in these five positions to be worth the salaries they propose to give, the only conclusion to be reached is that the Patent Office examiners are recognized by the War Department as being underpaid. Obviously the Patent Office cannot compete with the War Department in the search for men equipped to do patent work, and the result must be a further loss of assistant examiners in the Office to the War Department and further difficulty in finding men from the outside to accept the salaries offered in the Patent Office.

G. P. T.

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RULE 41. DISCUSSION CONTINUED.

—■—

In attempting to lay down any rules for joinder of inventions in an application one is at once confronted by the fact that no invariable rule is tenable since, as held in the Steinmetz case, each case must be adjudged by itself. (see also *ex parte* Young, 1885), but it may be possible to review the several classes of invention and point out certain of the more common conditions and in a general way how they may be treated.

The Office rule classifies inventions as

(1) Independent. These must be divided.

(2) Distinct inventions dependent on each other and mutually contributing to produce a single result. These may be claimed in one case or may be divided according to the nature and character of the relationship and the nature of the result.

As hereinbefore pointed out there will be found to exist cases where the inventions (if more than one exists) are either not distinct by reason of their nature or are not distinctly claimed. The former may arise where the claims are merely different statements of one and the same idea, in product and process, or in process and machine, or are only differing breadths of the same stated invention or where different claims based on the same machine or process are so interwoven and overlapping that no clear line of cleavage between the different parts of the invention can be discerned. The latter may arise where claims to two inventions capable of severance and of distinct statement are yet so drawn that no clear line may be made between them. In the former case division may not be made but in the latter it may not be made as the claims exist but may arise if and when the claims are clearly drawn. *Ex parte* Lord, 1890.

Independent inventions are those which are disconnected in design and operation.

Inventions in the four statutory classes of Arts, Machines, Manufactures, and Compositions, are presumably independent (*in re* Frasch, C. D. 1906), but not invariably so,—since they may be dependent (see the Steinmetz case, 1904) and even inseparable (*ex parte* Lord, above). Each case must be tested and the question of actual independence decided.

Different species of a generic invention are indepen-

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dent where they are alternative and inconsistent in use or bear a substitutional relation. This does not apply where all parts claimed, although not shown together or necessarily used together, may be regarded or shown as parts of the same structure and are adapted for simultaneous or concurrent use. *Ex parte* Welch, C. D. 1900.

Division must also be required between different designs, (Beattie, C. D. 1879; Pope, C. D. 1883; Gerard, C. D. 1888), but not between claims to a design and claims to a mechanical invention—since an application to one of these may not be founded on an application to the other. Proudfit, C. D. 1876; Waterman, C. D. 1902.

Improvements on inventions in the different statutory classes are independent as are improvements on independent inventions in the same class.

Certain other cases of independence will be considered later. Where the independence of the inventions is clear, the requirement of division must be made under the Rule as it has existed for many years.

For the further consideration it will perhaps be found best to consider the classes of invention in order in which they are stated in the statute.

PROCESSES.

Robinson (473) says that "arts cannot be joined merely because they relate to the same subject or can be used for the promotion of a single ultimate result. Either must be in its own nature dependent on the other, or taken together they must constitute a combination process which is also the subject matter of the application."

Many materials are subject to more than one process during formation and these processes may be wholly independent, or they may be so connected in the operation and effect of one on the other that they may be joined. Processes of making dough, of forming it, and of baking it, will usually be unrelated except in the ultimate end to be attained. Nevertheless it may well happen that particular processes of forming, for example, ice cream cones and baking them may be so related as to form a combination process and claims to the subcombinations of forming and of baking be so designed and mutually adapted in the relation of their several steps as to be retainable in one case.

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Questions of division in process cases usually arise between claims to the general process and to subcombinations thereof. There is no reason of which I am aware why the general tests which apply in machine cases do not also apply here. Is the subprocess of a special nature and practically useful only with the main process, or does it constitute in itself a process capable of use in other relations? If the answer to the first question is yes, division should not be made. If the answer to the second is affirmative and if it is further true, that processes of the kind to which this subprocess belongs are known as the subject of invention and patenting so that they have a distinct status of their own and particularly if a separate field of research is involved, a division should ordinarily be required.

The treatment of so called branching processes comes under this head. A process of treating oil or felspar may involve steps A B C D, at which point certain substances are separated, one being treated by steps M N O and the other by X Y Z. Either of these groups may or may not be replaceable by other modes of treatment. If M N O is capable of use whether the substance it treats be derived by A B C D or in another way and if it answers the other tests above of a divisible sub-process, it should be divided out. It may be, however, that some product at Y passes back to C or to N and enters there, so that the functional isolation of M N O is destroyed. Where these cross relations occur between the branches it will usually be found that a unitary invention is present, not severable, by reason of the special relation of the branches of the process to each other.

A *process and product* may be so related that the process can make nothing else and the product be made no other way, the search being one. These should never be divided. The product may be made in various ways and the process capable of producing sundry things. These should be separated ordinarily. If the product can be made in no other practical known way, it is by that fact entirely dependent on the process and should go with it (Robinson, 473). The process may be capable of making only one thing which, however, may be made in other known ways. A journal block may be made by molding, machining or forging and I know of no reason why it should be joined with either of these. Where the

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process can only produce the product although the latter may be made in other ways and the field of search is the same, it has been held that division should not be required—see Adams, C. D. 1903, and Dallas, C. D. 1903. This, however, does not apply where the Office classification and search are not the same.

Machine and Process may be so intimately related that the so called process is nothing but the function of the machine, i. e., not an invention at all and hence not divisible. On the other hand the process may be a mode of treatment clearly distinct from the particular machine or even from any machine at all in that it may be carried out by manipulation. In this case no good reason for joinder appears to exist and this is particularly true if the fields of search diverge and a separate state of the art as to each exists. Where, however, a dependence exists by reason of the machine being the only practically available and known means of practicing the process they should ordinarily remain together. Another means of working the process may appear or may not and the development of the arts is best served by having them in one case, nor will their joinder burden the Office since the search is the same. Robinson also states that apparatus may be joined with the process, the performance of which is its only use. A machine may be built to perform a certain process and that may be its only use, but this may also be true of half a dozen other machines. Where a process may be so performed by several machines, and has a distinct place in the arts and a distinct field of search, reasons for joinder seem to be lacking. See, however, Robinson, 473, and *ex parte* Tyne, C. D. 1880. Where process and product are defined in terms of each other or where process and machine are similarly defined no division ought to occur. If that mode of definition is proper or necessary in the case, no division can ever properly occur in the case, since the claims are expressly limited to a mutual dependence. Such a case occurs where a process claim calls for its performance by all or certain elements of the machine. Wherever division between process, product and machine is required the full reasons should be given. If the question is important, for example, whether the product can be made in other ways, that allegation should be made and the other ways stated. It is obvious

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that such reasons should appear of record prior to the answer to an appeal.

Process and Composition. In *ex parte* Tschirner, C. D. 1901, it was held that no authority warrants the retention in one case of a dental nerve-destroying composition and the process of using it. This was approved in *ex parte* Stocking, C. D. 1902, in relation to an account book and the method of entering. Since then there have been several decisions by the Board of Examiners-in-Chief—see *ex parte* Whitney, Vol. 7, p. 20, and *ex parte* Beltzer, Vol.6, p.33—in which it was held that if the relation of a process of using a composition and the composition is this—that the composition has no other use than in the process and the process cannot be carried out otherwise, the two should be joined. This would accord with the rule as to process and product, but if the composition has various utilities no reason for joinder of the composition with one of its uses appears to exist in their nature. They should be divided in such case usually and always if the fields of search are divergent.

Machines. Cases of division between complete machines are not frequent. The rule of the courts that machines, kindred and auxiliary in that they are capable of use with one another to effect one end, may remain together, is more restricted in the Office. If two distinct machines, while contributing in common to an ultimate end, have each distinct and different proximate results, they are not dependent. Where, however, they are connected in design or operation or one cannot be contemplated as an operative instrument without the other or the use of one involves the concurrent and coöperating use of the other, they are dependent. Cases sometimes arise of systems of apparatus or machines where the individual apparatus or machine bears to the complete set the relation of an element or subcombination in a combination. In general the principles that govern joinder of an element and combination may be applied to such cases and should in such case claims to a machine be divided from other claims if it is capable of other uses and belongs to a known type of devices.

Machine and Subcombinations. Probably more than half of all division questions relate to combination and subcombination. For long it was held that when subcombinations or elements were the invention of one who

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invented the principal combination, they might be joined in one application with the principal combination—see Robinson, 472. This had, however, come to be modified by decisions such as Mansfield et al., C. D. 1902, Johnson, C. D. 1900, and Hall & Fraser, C. D. 1903, and it is believed to be the more modern doctrine and practice that where an element or subcombination which is claimed in the same case with a combination of which it forms a part, even if that combination be new, is clearly capable of use apart from the combination and in other relations and not restricted in its design, operation and capabilities to use therewith, and if in addition there is a developed state of the art in relation to it, constituting a different field of activity and search, division may be required without awaiting determination of the novelty of the combination.

Great care, however, should be used in this type of cases to see that the claims divided represent different inventions and not colorably different statements of one and the same thing and wherever any doubt exists the requirement should be withheld. Mansfield's case does not, I take it, mean that division must be, but that it may be required before the question of combination is settled.

It has been uniformly held since *ex parte* Herr, C. D. 1887, that separate improvements in the various parts of a machine or process where the general combination is old and the improvements contribute solely to the betterment of the individual functions of the parts, are divisible, if they belong to classes of devices which have attained a distinct status in the arts as evidenced by the classification or fields of search. *Ex parte* Stearnes, C. D. 1890, Healey, C. D. 1898, and Pelton, 1901, are examples of decisions on this point.

A machine or tool may have common parts, such as operating means or a holder, which serve as the basis of attachment or operation of any one of several groups of additional elements which are substitutional in their relation to each other. It is possible that the machine or tool may be claimed *per se* with its capabilities and also in combination with one group, if in their own nature dependent, but claims to combination with more than one group should not ordinarily be allowed in one case.

Whenever a subcombination claim is found in a case

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where the combination in which it occurs is also claimed, the first question to consider is whether the design and operation of the subcombination are specially limited or adapted to use in that combination or whether they are of a more general nature. If of a special character and not of general utility division should not be made. If, however, capable of use in other classes or types of machines, the question occurs whether any practical reason from the Office standpoint exists, in the shape of a different field of search into a different art. Upon these questions division of a subcombination or element from the main combination will usually turn.

Machine and Product. In Murray et al., C. D. 1873, Leggett, C., held that a machine and product may never be claimed together, but in 1874 he limited its application in Birun's case, which claimed a die and article, saying:

> It cannot be ignored that there are some cases where two things entirely distinct are yet so intimately connected as to have been not only one in inception in the mind of the inventor but to be inseparable in practical use.

The discussion there exemplifies well a case of mold and product which recently occurred. See also *ex parte* Winterlich, C. D. 1879 and *ex parte* Tyne, C. D. 1880.

Where the machine in operation can only produce the product and its characteristics are directly related to the product, the two should not be separated if the product can only be made by the machine. Cases of this kind will rarely occur, machine and product being in all ordinary cases independent inventions, and when they do occur it will usually be found that one claim is merely a misstatement of the invention in the other.

Compositions and Subcombinations. The principles governing the inclusion of claims to the combinations and subcombinations of a composition in one case are not different from those applied to processes or machines. *Ex parte* Hentz, C. D. 1884, defined them and overturning prior holdings that a composition needs but a single claim has been affirmed since in several cases. The claims were to a curative compound *per se* and associated with an anodyne and it was held that if the claims though distinct cover associations of elements which contribute to the production of a single beneficial result and do not fall under different classes "they cover but a single invention." If the essential elements of a claim

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are omitted in another claim so that the effect and operation of the composition is changed, the invention would be a different one and divisible, but the addition of elements, as an anodyne, to the cure, or of coloring matter, or an anitfreezing element, which do not effect the operative nature of the composition ought not to create opportunity for division.

In the above I have endeavored to recapitulate what seems to me to be the proper practice in certain types of cases covering the great majority of questions of division. It is as futile to attempt to lay down hard and fast rules in relation to this subject as it is to decide by rule what is an invention. In the nature of things rules fitted to inventions which are known will not always apply exactly to inventions which are new. This has been well recognized in the decision of the Supreme Court which requires the application of the judgment and discretion of the Commissioner in each case, instead of the application of a dried and cut rule. In the application of that discretion (which is entrusted primarily to the examiner) the interest of the inventor is a primary consideration, and it would seem to be consonant with his interest and with that of the public to lay down as fundamental, that division should never be required except where there is more than one real invention—nor where the issuance of patents along the line laid down would or might raise a serious question of double patenting or between things of such a light nature as to make the requirement trivial and, further, that where a case of grave injury to the applicant may result by insistence on division, it may well be waived.

It is to the public interest that useful inventions be patented and published but it is not to the public interest that indirect extension of monopoly occur by successive issuance of patents, all of which are to parts of the whole invention, and necessary to the use of the invention, and consequent hampering of the right to use effectively the invention of the expired patent. Such conditions should be borne in mind by the Office and avoided so far as possible.

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RULE 42.

This rule relates to questions of practice under division and the decisions relating to these questions have been so fully collected and carefully treated by Mr. W. H. Whitten in paper 55 of Papers read before the Examining Force in 1917 that it is superfluous to go over the ground.

One comment only on the last sentence of the Rule, which states that *after a final requirement* of division the applicant may elect to prosecute, etc. This presupposes that applicant either complies with the requirement or traverses it, giving his reasons for traversing as in other cases of rejection. The examiner may then reconsider with a knowledge of applicant's position and either withdraw, modify, or affirm with the approval of the law examiner. After such affirmance the election may be made and become effective and examination on the elected branch proceed.

It not infrequently happens that in response to a first requirement, an election is made without complying with Rule 69 in pointing out the error of the examiner. Such action is not responsive, nor of a kind to avoid abandonment. If the examiner disregarding the incompleteness of the response, proceeds, without knowing the applicant's reasons for non compliance, to make the requirement of division final and acts on the elected branch, it may well happen that, if appeal be subsequently taken on the merits and on division, the applicant's reasons for non compliance with the requirement of division may never be of record except in the appeal brief. No good reason is seen why a full response is not as necessary to a rejection for improper joinder as any other rejection and why a failure to give full response should not lead to a holding of abandonment.

RULES 43 AND 44.

In the edition of the Rules dated December 1, 1879, Rule 42 reads as follows:

> When an applicant makes two or more applications relating to the same subject matter of invention, all showing, but only one claiming, the same thing, those not claiming it must contain disclaimers thereof, with references to the application claiming it.

In the edition of the Rules of April 18, 1888, Rule 42, above, was abolished, the rules renumbered and present

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Rules 43, 44 inserted in their present form.

In *ex parte* Long, C. D. 1883, it was held in accordance with long standing practice that "having described, shown and claimed his invention in his patent, he has no right to thereafter file an application for subject matter shown and described in such patent." "Nor has he a right to reserve a portion of his invention and after the grant of a patent claim in a separate application such reserved portion." See, also, *ex parte* Rohn, C. D. 1883.

In Derby, C. D. 1884, it was ruled that for matter shown but not claimed in a patent, a reservation clause coupled with diligence in filing a subsequent application, would overcome the presumption of abandonment.

In *ex parte* Roberts, C. D. 1887, it is pointed out that part of an indivisible invention cannot be saved for future patenting by reservation, but that it is otherwise with reference to a divisible invention if a copending application therefor be made, or if a reservation of the divisible matter be made and the second application filed promptly.

In *ex parte* Blair, March 24, 1888, C. D. 1888, C. Hall held that if the inventions are properly divisible, applicants rights to the one not claimed in the case in question were safe without reservation or if not so he could in any case have a concurrent application, and expressed his opinion that the rule should forbid reservations. Following this in the Rules of April 18, 1888, present Rule 44 was inserted. A reservation cannot save for future application a thing which is indivisible from that patented, nor is it necessary to save a thing which is clearly divisible. It therefore becomes useless and being deterrent and confusing to the public and having no relation to the thing claimed is rightly forbidden. The modern doctrine in respect to dedication of matter disclosed but not claimed in an application is found in *ex parte* Mullen and Mullen, C. D., 1890.

Ex parte Blair upholds the necessity for cross reference to a concurrent application claiming matter shown and described in the other case but not claimed. Such reference should be explicit, giving date and number, so that persons interested in the patent issued may ascertain by inquiry where the application referred to is and what it contains and claims. *Ex parte* Finch, C. D. 1884. A

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mere reference to the number and date of the application is, however, not sufficient—the reference must impart a more or less definite nature of the scope of matter in the application referred to. *Ex parte* Everitt, C. D. 1889.

The cross reference cannot be used to supplement or take the place of a full description of the machine claimed in the case embodying the reference. *Ex parte* Borgfeldt, C. D. 1889, and *ex parte* Chadwick, C. D. 1891.

The importance of cross references is very great and Rule 43 should be invariably and rigidly observed.

The provisions of Rule 45 are for the most part self-explanatory. The requirement as to the interlineations and erasures is necessary in order that it may be clear that the application as filed, including all changes, has been applied for by the inventor and been declared to be his invention, and the prerequisite oath with reference to the disclosure as interlined taken.

OF PERSONAL INTEREST.

Resignations of the following assistant examiners within the past two months to take more advantageous positions indicate revival of business and emphasize the need of higher salaries to keep experienced examiners in the corps.

Nathan Comstock, 1st Asst. Examiner.
Hadley Freeman, 2nd Asst. Examiner.
P. C. Smith, 1st Asst. Examiner.
A. A. Smith, 2nd Asst. Examiner.
Donald H. Sweet, 3rd Asst. Examiner.
W. W. Seals, 4th Asst. Examiner, Temp.
John W. Garner, 4th Asst. Examiner, Temp.
Alfred T. Hyde, 4th Asst. Examiner, Temp.

Primary Examiner Loren A. Sadler, formerly in charge of Div. 12, resigned on March 12 on account of impaired health. In this the Office loses a very capable Division Chief, universally liked and respected.

Primary Examiner Thurber has in his possession two patents of particular value as keepsakes because they were granted to his grandfather, Hezekiah Thurber, but which are also of great interest because of the notable signatures they bear. The earlier grant was made on May 22, 1828, and is signed by President "J. Q. Adams"

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and attested by "H. Clay" as Secretary of State. It was certified to as "conformable to law" by "Wm. Wirt," Attorney General of the United States. The patent was for a Machine for Cutting Pegs. The second patent, granted on April 22, 1830, was for a machine for washing clothes. It has a large bold signature of President "Andrew Jackson," attested by "M. Van Buren," Secretary of State. The certificate of the Attorney General is over the carefully written signature of "John Macpherson Berrien."

The patent grants are in manuscript on heavy parchment. They were issued under the old laws and have no concluding claims. The first patent is without a drawing, but the second has a drawing made by C. M. Keller, one of the Patent Office draftsmen. The single figure of the drawing is neatly lettered and through the use of several tones and colors of water-color wash is given an artistic finish not found in the drawings of the present day.

An endorsement on each of the patents is reminiscent of the Patent Office fire of December 15, 1836, it setting forth that the patent was "Received 5 August, 1837, and recorded anew in this Office. Henry Ellsworth, Commissioner of Patents."

Former First Assistant Examiner Charles W. Powers resigned from the Office March 15th and his death from complications following influenza occurred a few days later. Mr. Powers was appointed from Vermont Oct. 1, 1908 and was promoted through the grades, reaching that of First Assistant, Oct. 16, 1917. Except for some months in 1914 when he was in the Classification Division, and his last few months' service in Division 16, he was connected with Div. 4. He was always highly esteemed as most efficient and capable, the character of his work exciting attention for its thoroughness and quality.

A SPECIFICATION OF APPRECIATION.

To all Whom It May Concern:—

Be it known that I, Phil J. Nawn, a citizen of the United States, residing at Milwaukee, in the County of Milwaukee, and State of Wisconsin, have discovered a new

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and valuable element intended to lend desirable aid to all who are professionally interested in Patents and the procuring of the same.

My discovery, more particularly, refers to a means whereby a minimizing is brought about of that friction which sometimes occurs between a certain element, without the Patent Office, and a body, erroneously considered antagonistic, holding forth within.

Referring to the drawings:—

Figure 1. is a P. O. order for $2.50 and is a true section taken from the postmaster's "stub" and Figure. 2 is a properly filled out subscription blank giving identifying and locating diagrams.

Further reference to the drawings discloses in Fig. 1 a means whereby applicant hopes to receive, each month, the "Journal of the Patent Office Society" delivered as indicated on the said diagrams in Fig. 2 and prays that his surname, along with such prefixes as will distinguish the same from "Bill Jones," be emblazoned across the "tome of subscribers," there to remain for a twelve month or longer, providing, of course, that a corresponding drawing be furnished for similar filing upon due notice of such requirement.

Having described my discovery, what I wish to claim, is:—

1. The pleasure of reading during the month something about which I am daily interested in.

2. The successful issue of a venture which will aid in bridging a gap that has long been a chasm of misunderstanding.

Yours for prosperity,

[L. S.] PHIL J. NAWN,

Patent Expert, Bucyrus Company.

Milwaukee, Wis., 11-23, 1918.

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VOL. I. JUNE, 1919. No. 10.

EDITORIAL.

The Patent Office Society in furtherance of its desire to support in every way that comports with official propriety the measures to improve the Patent Office and patent system, proposed by the Patent Committee of the National Research Council, has undertaken, under the direction of a sub-committee of its Publicity Committee, a campaign to give wide publicity to the needs of the Patent Office and the legislation proposed.

Letters and pamphlets have been mailed to over fifty thousand persons in the United States directly interested in patents and the patent system. Included in this number are over eleven hundred heads of manufactur-

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ing concerns. These pamphlets comprise the speech of former Commissioner Ewing, delivered before the Atlantic City War Industries and Reconstruction Conference, Dec. 3, 1918; a pamphlet setting forth the needs of the Patent Office and explaining the measures proposed by the Patent Committee, and a pamphlet giving a short account of the history and organization of the Patent Office.

Letters accompanied the pamphlets, pointing out that if the average member of Congress were aware of existing conditions in the Patent Office, there is not the least doubt but that he would be glad to aid in the passage of the legislation needed for its relief.

In addition, a circular letter has been sent to nearly eleven thousand daily or weekly newspapers and trade journals throughout the country. This letter epitomizes the report of the Patent Committee, emphasizes the lack of adequate appropriations by Congress for the support and growth of the Office, and asks the support of the Press in the campaign of education.

That this campaign of the Society has involved considerable work, is obvious; it is desired to state that practically all members of the Society have assisted and cheerfully devoted their evening hours to the preparation of mailing lists and the other necessary clerical work.

Note is made at this time of these activities of the Patent Office Society that it may be shown how deeply and personally interested the members of the Society are in the well being of the Patent System. Further comment seems unnecessary.

"Section 440 specifies the salaries of these officers (Patent Office officials). Sec. 478 provided a seal. Sec. 486 creates a scientific library. Secs. 489 and 496 relate to printing and disbursements. While there are numerous other provisions for the conduct of the Office, they need not be quoted here.

"No writer on the subject of patents would do his full duty who did not raise his voice in solemn protest against the present inefficient provision made by Congress for the needs of the Office."—Macomber's Fixed Law of Patents: 2nd Ed., 1912, p. 716.

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FRANCIS W. H. CLAY

ASSISTANT COMMISSIONER OF PATENTS

BORN FEB. 9, 1869

DIED MAY 10, 1919

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FRANCIS W. H. CLAY.

Assistant Commissioner Francis W. H. Clay died of pneumonia May 10, 1919, at his home in Cleveland Park, Washington, D. C., after a brief illness. His death came as a distinct shock, as very few of his friends and associates were aware of the critical nature of his sickness.

Mr. Clay was born at Richmond, Madison County, Kentucky, Feb. 9, 1869, and was a grandson of Gen. Cassius M. Clay, who was a nephew of Henry Clay, and ambassodor to Russia during Lincoln's administration. Mr. Clay, after receiving his early education in Kentucky, spent several years at Ann Arbor, Michigan, attending the university there, and later, he went to Cornell, where he graduated as an electrical engineer in 1893. He fitted himself further for his future career by pursuing an extended legal course of study, obtaining the degrees of L. L. B., L. L. M., and M. P. L.

He was appointed to the Patent Office as an assistant examiner April 30, 1898 and resigned in 1900 to enter upon the practice of patent law in Cincinnati. He removed to Pittsburgh in 1902, where he practiced his profession until he was appointed Assistant Commissioner of Patents, July 19, 1916. He was not only engaged in highly important cases as an attorney, but found time and occasion to create and patent several inventions, among which may be noted a very unique device whereby a pencil of reflected light is guided by a vibrating diaphragm over a sensitized surface to produce sound records, the object being to produce a line record "without the use of any tools or other instrumentality than chemical agents."

It was in Pittsburgh that Mr. Clay met Miss Jane Watson of Frankfort, Kentucky, to whom he was later married. He leaves a bereaved widow and five children. Two brothers and his mother survive, the latter being in her eighty-fifth year.

The most noted litigation Mr. Clay was connected with was the suit involving the validity of the reissue of the original Marconi wireless patent. With F. W. Winter of Pittsburgh and Melville Church of Washington, D. C., he was of counsel for the defendant in the famous

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case of Marconi Wireless Tel. Co. v. National Electric Signal Co. (213 F. R., 815) where there were spread on the record a brilliant and remarkably comprehensive review of the art and history of the scientific development of the "Hertzian wave" theory.

Assistant Commissioner Clay created an indelible impression upon the Office in the administration of his position. His attitude towards the inventor was liberal, but always with an eye on the rights of the public. He knew well the underlying justification of the patent law, its relation to industry and the need for a generous but careful application of its principles. In his solicitation to assist the inventor in obtaining all that he is entitled to, in his efforts to impress the principle that the patent shall explicitly delineate the invention, and in his desire to emphasize that confusion and obscurity shall be excluded from the instrument, he let not the dead hand of any devitalized precedent stay him from pursuing the path leading to an equitable goal. Always was he searching for the fundamental consideration, and resting his reasons on the ever-present, living basic law. This attitude and method of approach is amply illustrated in his well-known decisions—*ex parte* Brown, 235 O. G., 1355, and *ex parte* Jepson, 243 O. G., 525. In both of these decisions, involving a delineation of the claim, there is not only exhibited an exhaustive history of the laws and decisions governing the merits of the question, but there is considerable breaking of new ground and a freshness of treatment that is unusually stimulating. He was not an iconoclast, his attitude was always constructive, but to arrive at a sound conclusion he never feared to utilize unique methods nor to depart from time-honored, conventional conclusions.

In his two addresses before the Examining Corps (published respectively in the *Scientific American Supplement* of Feb. 9, 1918, and the JOURNAL OF THE PATENT OFFICE SOCIETY of Sept. 1918) he showed similar qualities of mind. His searching power of analysis, his ability to visualize a situation in happily chosen language, and the philosophical character of his outlook were here characteristically displayed and well proclaimed the intellectual man.

Mr. Clay's relation to the Examining Corps was of

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intimate and friendly character, and based upon complete understanding and sympathy. He was in complete accord with their aspirations towards establishing a more efficient Patent Office, for increasing its dignity, and making association therewith the opportunity for an honorable and permanent career. In the death of Mr. Clay, cut off in the prime of his powers, the employees of the Patent Office, his associates, and the Patent Office Society feel that they have lost a friend and a strong influence for good. W. I. W.

RESOLUTIONS OF THE PATENT OFFICE RELATIVE TO THE DEATH OF HONORABLE FRANCIS W. H. CLAY.

It is with keen regret and profound sorrow that the Patent Office records the death of Hon. Francis W. H. Clay, Assistant Commissioner of Patents, which occurred on May 10, 1919.

Mr. Clay was born in Richmond, Kentucky in February, 1869, of distinguished lineage. His career during his fifty years of life was one which reflects honor and credit to him and is remembered by his friends and associates with the highest regard and esteem, and as an inspiration in days to come.

He was a man of unusual attainments, of charming personality and one whose companionship was not only a joy but uplifting and worthy. He was a man of upright character and integrity, true to himself and to those with whom he came in contact, proving so well the worth of Polonius's advice to his son: "This above all; to thine own self be true, and it must follow, as the night the day, thou canst not then be false to any man."

Mr. Clay's service in the Patent Office was of great value, and his loss is mourned by all officials and associatts. Be it, therefore,

Resolved, That in the death of Francis W. H. Clay the Patent Office has lost one of its most estimable and able officers, and all those who knew him a staunch and valued friend; Be it, further,

Resolved, That to his bereaved widow and family the Office extends its profound sympathy.

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DEPARTMENTAL EXHIBIT.

An interesting example for all the Government Departments to follow was set by the opening on May 19th by the Secretary of the Interior of a departmental exposition in the main corridor of the new Department of the Interior Building, continuing to May 31st.

The exposition was designed to be educational in nature; exhibits from each Bureau were selected or prepared that would best show the intimate relations between the work of the several Bureaus and the daily life and progress of the people of the United States. While the exhibits of the other Bureaus were most creditable and interesting, space affords opportunity for a review only of the Patent Office display.

This Office was given a liberal assignment of space and under the efficient management and untiring labors of a committee headed by Chief Clerk Coulston and Dr. E. A. Hill, a showing of the work of the Office and its important bearing on the industrial life of the nation was made that can not fail to help materially in the advertisement of the vital importance of maintaining and improving the patent system.

The work of the Office was exemplified by samples of applications, amendments, Office actions, etc.; an interesting showing of colored drawings formerly used with applications and a specimen of the modern style of drawing; examples of the patents issued by twelve foreign nations; a case of ancient scientific books to illustrate, it is presumed, the search work through publications; a copy of the most voluminous patent issued, the Paige Type Handling Machine patent, with its 48 pages of printed description and its 471 figures, and by its side, for comparison, a short design patent where the description and drawing are both on one page; samples of all Office publications.

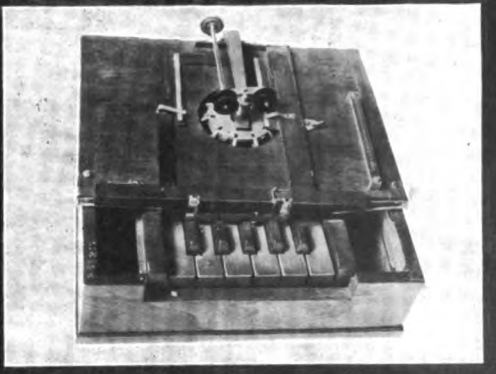
The attention of the visitor was repeatedly directed to the important bearing that patented inventions have on the industrial life of the nation, by large conspicuous sign cards carrying pithy slogans, certainly a telling feature.

But the most interesting part of the exhibit was undoubtedly the collection of models arranged in glass

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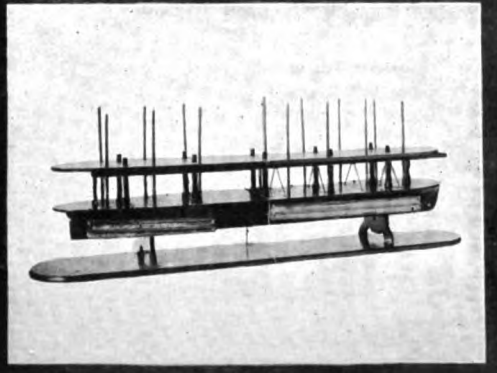
ELI WHITNEY'S
COTTON
GIN





AN EARLY
TYPEWRITER
WITH
PIANO KEYBOARD
—
PATENTED IN
1868

ABRAHAM LINCOLN'S
DEVICE TO FLOAT
RIVER VESSELS
OVER SHOALS





ORIGINAL
MODEL
OF
ELIAS HOWE'S
SEWING MACHINE

MODELS OF HISTORIC INVENTIONS FORMING PART OF THE PATENT OFFICE EXHIBIT OF THE

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cases. Each case included models of machines in a particular art comprising steam engines, fire arms, printing presses, textile machines, electric telegraphs, and harvesting machinery; the models in the last group were furnished by the International Harvester Co. There was also a collection of coal tar products in a separate case. The models, excepting the harvesters, and cases have been stored and exhibited during recent years in the National Museum; it is a great pity that they can not be put on exhibit in the Patent Office itself, as formerly, but lack of space forbids. They exercise a potent stimulating effect on invention which is largely lost by their separation from the Patent Office. In addition to the models in cases there were full-sized exhibits of a 400 H. P. Liberty Motor from Bolling Field, a collection of artificial limbs loaned by the manufacturers, a Browning machine gun and a working example of the automatic telephone exchange in use in the City Post Office in Washington. These, of course, appealed to everyone and contributed largely to the popularity of the exposition.

Demonstrators from the Patent Office force were on hand each afternoon and evening to explain the exhibits and their help should not be overlooked.

This venture of the Interior Department makes very plain the desirability of establishing in Washington a permanent exposition of governmental activities which shall serve to educate the people as to what the Departments are doing to serve the best interests of the people at large.

RULES 46, 47 AND 48.

By T. A. HOSTETLER, *Law Examiner.*

Rule 46.

The applicant, if the inventor, must make oath or affirmation that he does verily believe himself to be the original and first inventor or discoverer of the art, machine, manufacture, composition, or improvement for which he solicits a patent; that he does not know and does not believe that the same was ever known or used before his invention or discovery thereof, and shall state of what country he is a citizen and where he re-

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sides, and whether he is a sole or joint inventor of the invention claimed in his application. In every original application the applicant must distinctly state under oath that to the best of his knowledge and belief the invention has not been in public use or on sale in the United States for more than two years prior to his application, or patented or described in any printed publication in any country before his invention or more than two years prior to his application, or patented in any foreign country on an application filed by himself or his legal representatives or assigns more than twelve months prior to his application in this country. If any application for patent has been filed in any foreign country by the applicant in this country, or by his legal representatives or assigns, prior to his application in this country, he shall state the country or countries in which such application has been filed, giving the date of such application, and shall also state that no application has been filed in any other country or countries than those mentioned, and if no application for patent has been filed in any foreign country, he shall so state. This oath must be subscribed to by the affiant.

If the application be made by an executor or administrator of a deceased person or the guardian, conservator, or representative of an insane person, the oath shall allege the relationship of the affiant to the inventor and, upon information and belief, the facts which the inventor is required by this rule to make oath to.

The Commissioner may require an additional oath in cases where the applications have not been filed in the Patent Office within a reasonable time after the execution of the original oath.

The foundation for Rules 46 and 47 are found in Sections 4892, 4888, 4887, 4896, Revisted Statutes, in the order mentioned.

The first statutory requirement is that "the applicant shall make oath that he does verily believe himself to be the original and first inventor."

Neither the Statutes nor Rules make any provision for the filing of an oath to an application by any party other than the inventor so long as he is alive and sane (*ex parte* Stevens, 59 O. G., 229; 1892, C. D., 87).

Joint applicants may execute separate oaths (*ex parte* Wellman, 88 O. G., 2065; 1899 C. D., 176). If only one signs, the application is incomplete, but it is no estoppel against filing a correct oath (Kohler v. Kohler and Chambers, 43 O. G., 247; 1888 C. D., 19). Erroneous al-

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legation as to sole or joint invention is not perjury (Patterson v. U. S., 181 F. R., 970).

If an inventor dies or becomes insane, Sec. 4896, R. S., provides that his executor, or administrator, or his guardian or representative, as the case may be, may make application and make the required oath, properly varied in form, that it can be made by him.

The second requirement is that he shall make oath "that he does not know and does not believe that the same was ever before known or used." The allegation "that he does not know" without the allegation as to "belief" is insufficient (*ex parte* Buddington, 84 O. G., 1728; 1898 C. D., 184), and *vice versa*, an allegation as to "belief" without an allegation as to "knowledge" is not a compliance with the statutes (*ex parte* Nicholson, 96 O. G., 1035; 1901 C. D., 86).

The expression "ever before known or used" has reference to the time of invention and not to the date of filing (*ex parte* Rowan, 22 O. G., 1037; 1882 C. D., 12), and the third requirement is "shall state of what country he is a citizen."

Under the present statutes the statement as to citizenship is of no particular importance, but under the Patent Act of 1836, 5 Stat. at Large 117, 119, the patent fee payable by a citizen or a person who had declared himself to become a citizen, was $30, whereas an alien was required to pay at least $300, and if a British subject, $500. A patent obtained by a fraudulent statement of citizenship in order that the $30 fee should be accepted, while this statute was in force, was held invalid (Child v. Adams, I Fisher, 189; Fed. Cas. No. 2673).

The Patent Act of 1870 abolished all such discrimination against aliens in respect to the grant of letters patent and therefore the same necessity for correct statement of citizenship no longer exists as is evident from the decision in Tonduer v. Chambers, 37 Fed. Rep., 333; 46 O. G., 110, in which a patent was held valid although the applicant, apparently with no intent to deceive, misstated his citizenship.

Where the oath does not state the inventor's citizenship, but states that he has declared his intention of becoming a citizen of the United States, the oath is defective and a new oath is required (*ex parte* Rhodes, 105 O.

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G., 1261; 1903 C. D., 257). Where the oath states that the inventor is not a citizen of any country, it was held to be a proper compliance with the requirements of Section 4892, R. S., as the section should not be construed as requiring citizenship of some country as a condition precedent to the grant of a patent (*ex parte* Benecke, 126 O. G., 3423; 1907 C. D., 66).

The provisions of Rule 46 should be strictly followed. To rule otherwise would cause endless confusion in determining whether or not the language chosen by the applicant in his oath was sufficient to comply with the requirements of the statutes (*ex parte* Thorsten von Zweibergk, 110 O. G., 859; 1904 C. D., 176).

A patent which is not supported by the oath of the inventor, is unauthorized by law and void and whether taken out in the name of the applicant or of any assignee of his, confers no rights as against the public (Kennedy v. Hazelton, 128 U. S., 667). If the inventor is a minor, the oath should be made by him (Fetter v. Newhall, 25 O. G., 502; 1883 C. D., 429; 17 F. R., 841).

VENUE. The venue should agree with the jurisdiction of the notary, which in some states may be a single county, in others, several counties, or even the entire state. John's American Notaries gives the jurisdiction and other data regarding notaries. If it appears that the notary acted outside his jurisdiction either a new oath should be filed or an affidavit of the notary who administered the original oath stating where the original oath was administered (*ex parte* Delavoye, 124 O. G., 626; 1906 C. D., 320).

In Prym v. Heilbruner, 81 O. G., 2245; 1897 C. D., 192, a foreign application oath in which no venue or indication of the place where such affirmation was made appeared, except in the seal of the consulate impressed on the paper, was accepted as sufficient.

In order to obtain a patent an inventor must not only invent something, but he must take proper action to preserve his rights so that the bar of public use and other statutory bars to the grant of a patent mentioned in Rule 46, may not arise, and until the applicant has made an oath in regard to the statutory bars referred to in Sections 4886, 4887, and in Rule 46, he has not made out a *prima facie* case that he is entitled to a patent.

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In the public use clause "two years prior to his application," has reference to the filing of a complete application and not to the date of the oath (Miller v. Lambert, 72 O. G., 1903; 1895 C. D., 77). Public use or sale abandons only the exact invention used or sold (Graham v. McCormick, 21 O. G., 1533; 11 F. R., 859).

Rule 47.

The oath or affirmation may be made before any person within the United States authorized by law to administer oaths, or, when the applicant resides in a foreign country, before any minister, charge de'affaires, consul, or commercial agent holding commission under the Government of the United States, or before any notary public, judge, or magistrate having an official seal and authorized to administer oaths in the foreign country in which the applicant may be, whose authority shall be proved by a certificate of a diplomatic or consular officer of the United States, the oath being attested in all cases in this and other countries, by the proper official seal of the officer before whom the oath or affirmation is made, except that no oath or affirmation may be administered by any attorney appearing in the case. When the person before whom the oath or affirmation is made in this country is not provided with a seal, his official character shall be established by competent evidence, as by a certificate from a clerk of a court of record or other proper officer having a seal.

When the oath is taken before an officer in a country foreign to the United States, all the application papers must be attached together and a ribbon passed one or more times through all the sheets of the application, and the ends of said ribbon brought together under the seal before the latter is affixed and impressed, or each sheet must be impressed with the official seal of the officer before whom the oath was taken.

BY WHOM ADMINISTERED. An applicant's attorney cannot act as a notary (Opinion of Attorney General, 127 O. G., 3642, 1907, C. D., 437; Hall's Safe Co. v. Herring, 135 O. G., 1804, 1908, C. D., 473; 31 App. D. C., 498). An oath executed before the attorney in the case is invalid and application is incomplete just as if no oath had been filed (Riegger v. Beierl, 150 O. G., 826; 1910, C. D., 12).

During the past few years many oaths have been executed by persons in the military service of the United

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States before certain military officers who, when in this country, have jurisdiction only in military affairs but when in a foreign country have also jurisdiction in civil affairs as provided in Article 114, Articles of War, which reads as follows:

> Art. 114. AUTHORITY TO ADMINISTER OATHS.—Any judge advocate or acting judge advocate, the president of a general or special court-martial, any summary court-martial, the judge advocate or any assistant judge advocate of a general or special court-martial, the president or the recorder of a court of inquiry or of a military board, any officer designated to take a deposition, any officer detailed to conduct an investigation, and the adjutant of any command shall have power to administer oaths for the purposes of the administration of military justice and for other purposes of military administration; and in foreign places where the Army may be serving shall have the general powers of a notary public or of a consul of the United States in the administration of oaths, the execution and acknowledgment of legal instruments, the attestation of documents, and all other forms of notarial acts to be executed by persons subject to military law. (R. S. Sec. 1342, amended, Aug. 29, 1916, c. 418, Sec. 3, 39 Stat. 669.) See July 27, 1892, c. 272, Sec. 4, 27 Stat. 278.

If not attested by the proper official seal of the officer a proper oath will be necessary before the patent finally issues.

RIBBON. In the case of an application executed abroad and filed with the ribbon cut and tied together again, applicant was ordered to show cause why his application should not be stricken from the files (*ex parte* Johns, 15 Gour., 71, 25, decided September 5, 1903). Where an application was executed before a U. S. consul and the papers were not all included in ribbons, the application was stricken from the files (*ex parte* Altman, 80 O. G., 1475, 1897, C. D., 52). Where the ribbon was omitted in an application executed abroad, the papers were returned (*ex parte* Bagot, 91 O. G., 1802; 1900 C. D., 80). The present practice, however, is to accept the application and forward it to the examining division with instructions to require substitute papers properly ribboned.

The State Department has issued instructions to the diplomatic and consular officers of the United States in

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administering oaths for patent applications to pass a ribbon through all the sheets and bring the ends of the ribbon together under the seal before the latter is affixed or impressed (79 O. G., 1525).

The Spanish diplomatic and consular officers of Spain in charge of the interests of the United States in the enemy countries do not hold a commission under the Government of the United States within the terms of Section 4892, R. S., and are not vested with power to administer oaths or to prove the authority of a foreign official before whom the oath is taken. See the opinion of the Solicitor of the Department of the Interior, 250 O. G., 513.

CONSULAR FEE STAMP. Order 2032 of February 13, 1913, provides that in all applications executed abroad, from which the required consular fee stamp has been omitted, the first requirement in the case will be that the necessary stamp be forwarded to this Office, to be affixed to the affidavit and canceled by the Chief Clerk of the Patent Office.

Rule 48.

When an applicant presents a claim for matter originally shown or described but not substantially embraced in the statement of invention or claim originally presented, he shall file a supplemental oath to the effect that the subject matter of the proposed amendment was part of his invention, was invented before he filed his original application, was not known or used before his invention, was not patented or described in a printed publication in any country more than two years before his application, was not patented in any foreign country on an application filed by himself or his legal representatives or assigns more than twelve months prior to his application, was not in public use or on sale in this country for more than two years before the date of his application, and has not been abandoned. Such supplemental oath must be attached to and properly identify the proposed amendment.

In proper cases the oath here required may be made by an executor or administrator of a deceased person or a guardian, conservator, or representative of an insane person. (See Rule 46.)

When a patent is granted all the claims must be supported either by the original oath or by some supple-

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mental oath of the applicant (53 O. G., 2041; 1890 C. D., 181). The original oath applies to what is described and also to what is claimed and is not limited merely to what is both described and claimed. Walker on Patents, Sec. 123, citing Crompton and Knowles Loom Works v. Stafford Co., 205 Fed. Rep., 925.

It is only necessary that the subject-matter shall have been covered and the scope of the claims may be changed to include a feature shown, but not previously specifically described or claimed, if the original statement of invention or claims were broad enough to cover the specific feature (*ex parte* Matthes, 101 O. G., 3108; 1902 C. D., 484). Mere change in terminology does not necessitate a supplemental oath. The question of supplemental oath should be disposed of before forwarding an appeal (*ex parte* Teller, 113 O. G., 548; 1904 C. D., 468).

Where both process and apparatus could be joined in one application, process claims could be added without a supplemental oath if the process is covered by the statement of invention (*ex parte* Lillie, 53 O. G., 2041; 1890 C. D., 181; Williams Co. v. Miller, 97 O. G., 2308; 1901 C. D., 517). But a supplemental oath is required if the process is not embraced in the original claims or statement of invention (*ex parte* Perkins, 55 O. G., 139; 1891 C. D., 63; *ex parte* Lillie, 53 O. G., 2041; 1890 C. D., 181).

Article claims not covered by original statement of invention cannot be added to process application without a supplemental oath (*ex parte* Ruckrich, 106 O. G., 765; 1903 C. D., 314). When claims are in wrong form, purporting to be for a process, when the real invention is in the article, the examiner should suggest the amendment and no supplemental oath is required (*ex parte* Trevette, 101 O. G., 3108; 1901 C. D., 170). Whether a supplemental oath is necessary is a question of form and does not furnish a ground for rejecting the claims (*ex parte* Weidemann, 81 O. G., 2245; 1897 C. D., 194; Phillips v. Sensenich, 134 O. G., 1806; 1908 C. D., 391; 31 App. D. C., 159).

A supplemental oath is required for claims in a divisional application if it would have been required for an amendment presenting the same claims in the original application, and the allegations required by Rule 48

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may be incorporated in the oath of the divisional application (*ex parte* Henry, 64 O. G., 299; 1893 C. D., 88).

Technically, an amendment requiring a supplemental oath will not be entered unless accompanied by the required oath unless a particular hardship is thereby imposed upon the applicant (*ex parte* Ruckrich, 106 O. G., 765; 1903 C. D., 314); but it will be entered to save the case from abandonment (*ex parte* Yerdon, 101 O. G., 1830; 1902 C. D., 411; *ex parte* Gaylord, 117 O. G., 2366; 1905 C. D., 309).

In an application involved in an interference a requirement for a supplemental oath may be waived until the interference is terminated (*ex parte* Richards, 95 O. G., 1853; 1901 C. D., 46; *ex parte* Weidemann, 81 O. G., 2245; 1897 C. D., 194; Phillips v. Sensenich, 134 O. G., 1806; 1908 C. D., 14; 31 App. D. C., 159). The supplemental oath should identify the application (*ex parte* Cook, 61 O. G., 1480; 1892 C. D., 232), and this applies to all papers filed in an application.

A supplemental oath is not a response to a rejection on the ground of new matter (*ex parte* Moore, 197 O. G., 533; 1913 C. D., 251). The office of a supplemental oath is to justify the introduction by amendment of a claim not substantially embraced in the statement of invention or claim originally presented and affords no justification for the introduction of new matter (Steward v. Ellis v. Lee v. Howe, 49 O. G., 1983; 1889 C. D., 243).

HUMOR OF THE WITNESS STAND.

Q. How do you fix the time as some time in June?

A. Well, I know that I went on my vacation the first of August and that is the last vacation that I have had as I got married after that, and I haven't had any vacation since. As I remember it, it was more than a month before I went on my vacation.

Q. Why did you color your drink with caramel?

A. Well, it looks good that way—and you can't detect a fly or bug that might be in it,—one good reason.

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EXCERPTS FROM A RECENT LETTER OF DR. L. H. BAEKELAND TO MR. BERT RUSSELL.

Your letter dated April 15th, addressed to Dr. Hale, was sent to me after some delay, accompanied by a letter from him dated April 18th. I should have received it sooner but for the fact that I am snowed under in some urgent work which literally requires every minute of the day my full concentration of thought. I am suing one of the infringers of some of my patents. I have been in court now for several weeks, every day, and it looks as if I shall have some weeks more of it. Under the circumstances, my mail is, naturally, neglected.

This litigation not only costs fearful amounts of money and time to the litigants, but is a great expense to the United States Government, because it paralyzes one of its courts for months in succession, and most of the time is taken up by revising and criticizing the action of Patent Examiners of our United States Patent Office. This in itself is significant, because it means considerable expenses for the Government, salaries for the judges, court attendants, rent, heat and fuel, and in the meantime, other important business for the courts has to be postponed. Whatever money is spent by the litigants ultimately is paid by the public, because the manufacturers charge these expenses in their general expenses, so that finally the public pays the cost. I have come to the firm conviction that if the United States Government increased the salaries of the Patent Examiners tenfold, it would, nevertheless, be a great economy to the Government and to the people of the United States, if, by doing so, the United States Patent Office could insure special inducement for obtaining the most competent and best qualified men as Examiners and for enabling them to work under better conditions, so that a patent allowed by the United States Patent Office should acquire thereby a greater prestige before our courts and before would-be infringers or the lawyers who represent them.

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A LETTER TO THE EDITOR.

Worcester, Mass., May 20, 1919.

To the Editor:

In his article "Patents—A Business Barometer" Mr. John Boyle, Jr. has drawn some strange conclusions from the curves which are reproduced in your May number. Practically everyone who has had anything to do with patents knows that his conclusions are diametrically opposite to the experience of the past two years. During the latter part of the war, when the business of the country was rushed as it had never been before, the work of the patent solicitors and Patent Office fell off very materially. About three months after the armistice was signed, when the business of the country was taking a rest, the patent business came on with a rush. That has been my personal experience ever since I have been in this line, no matter what the curves show. I remember very distinctly how I was swamped with new business during the panic of 1907.

It seems strange to try to prove any theory about the relation between business and invention by a "patent curve." I realize that Mr. Boyle has avoided the word invention throughout his article and that what he has to say about the paying of the final fees is undoubtedly true. It is more important however to note that the "application curve" is what shows the relation of invention to business and the sensitiveness to business changes of the "application curve" seems to me greater than that of the "patent curve." It is to be noted that in 1873 the number of applications filed was on the increase. The same was true in 1884, and much more clearly so in 1903 and 1907, while in 1890 the curve was substantially horizontal and the only depression that resulted in a decrease of applications was that of 1893. This slight decrease lasted for only one year and then there was a sharp rise but as we all remember that business depression continued for several years. Even in the "patent curve" high points were reached in 1890, 1903 and 1907. In other words, half of the six periods Mr. Boyle selected tend to disprove his theory even on the patent curve. If the patent curve has a relation to

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business it must lag about two years behind the business curve, because it takes on an average that length of time to secure a patent.

The explanation is, it seems to me, that necessity is the mother of invention. It is when men are out of work, or on short time, and when managers are trying to get new business that they are willing to think of inventions. Undoubtedly during times of prosperity there is more money available to put into patents and a larger proportion of the filed applications are patented. But anyone who tried to get a manufacturer, engaged in supplying the government during the war, interested in improvements knows that such men had no time for new things. That is true to a less extent during all periods of business prosperity, at least when prosperity reaches the extent of a boom.

Yours very truly,

ALBERT E. FAY.

(*Note*—Mr. Boyle makes the following comment):

Mr. Fay has fallen into the error of generalizing with only a few facts as a basis. One of the most sensitive indexes of business conditions is the bank clearings of the country.

If a curve representing bank clearings is placed in juxtaposition to the patent curve, the similarity is striking. No such similarity will be found in the application curve.

J. B., JR.

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SUGGESTED CHANGES IN INTERFERENCE PRACTICE.

BY H. E. STAUFFER.

The interference practice as it now exists is admittedly both involved and inconclusive. It is involved, because of the shifting of the case from one tribunal to another, and because of the number of questions other than strict priority which are decided either in the proceeding proper or as collateral thereto. It is inconclusive, because after the case is finally decided, further proceedings may be instituted under Section 4915, R. S., or the same questions can be raised in infringement proceedings.

Jurisdiction: Under the present practice the principal examiner prepares the papers for the contest. The institution of proceedings is to a limited extent supervised by a law examiner. The papers then come to the examiner of interferences, who sends out the notices and takes charge of the preliminary procedure. If motions to dissolve or amend are presented, the case is taken by the Commissioner in person, who decides whether the same shall be entertained. If entertained, the case goes to another law examiner to hear and decide the questions presented. He may dissolve or continue the proceeding, and his decision is binding on the examiner of interferences. From his decision appeal may be prosecuted to the board of examiners-in-chief, and from their decision a further appeal may be taken to the Commissioner in person. If the interference is not dissolved, it is again taken up by the examiner of interferences, who controls the taking of testimony, and makes his decision on the question of priority. From this decision another line of three appeals is set up: namely, to the board of examiners-in-chief, the Commissioner, and the Court of Appeals of the District of Columbia.

Inconclusivenesss After all this, the question of priority of invention only is decided (and this is not conclusive, as just explained above). The patentability of the issue, public use or sale, and similar matters are not tried out; at least, not as a part of the principal case.

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They may, however, be taken up in a collateral way by motion to dissolve, and by public use proceedings. It is these collateral proceedings, and the number of appeals allowed, that make interferences so involved and drawn out.

One Proceeding: All this is unnecessary. Collateral proceedings should be avoided, and all questions should be decided in the principal proceeding. Motions to dissolve should be abolished; the powers of the examiner of interferences should be enlarged to enable him to decide the right to a patent; and at least one of the appeals from his decision should be eliminated. Under such a procedure when jurisdiction has once been acquired by the examiner of interferences, he could decide all collateral as well as the principal questions which the case might present.

Amendment to Statute: The most direct and practical way to effect such a change would be to amend Sec. 4904 of the Revised Statutes so as to define the questions to be determined and the line of appeals to be provided. The whole matter could be taken care of by amending the statute as follows:

> Line 6, erase the word "primary." In line 9, erase the words "the prior inventor;" in line 10, erase the word "primary;" and in lines 10 and 11, erase the expression "or of the board of examiners-in-chief, as the case may be," and make amendments as follows:
>
> In line 6, after the word "examiner" insert the words "in charge of interferences;" at the end of line 6, after the word "determine" insert the words "which if any of the parties is entitled to a patent." In line 8, insert the word "any" before "party;" in line 9, insert the words "to be entitled thereto;" at the beginning of line 10, insert after "examiner" the expression "in charge of interferences,"

so that the entire section will read as follows:

> Whenever an application is made for a patent which, in the opinion of the Commissioner, would interfere with any pending application, or with any unexpired patent, he shall give notice thereof to the applicants, or applicant and patentee, as the case may be, and shall direct the examiner in charge of interferences to proceed to determine which if any of the parties thereto is entitled to a patent. And the Commissioner may issue a patent to any party who is adjudged to be entitled thereto, unless the adverse party appeals from the decision of the examiner in charge of interferences to the Commissioner in person within such time, not less than twenty days, as the Commissioner shall prescribe.

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Effect: Such an amendment would throw upon the examiner of interferences authority to determine in the first instance which if any of the parties is entitled to a patent. This of course would enable any of the contestants to raise the question of the patentability of the issue, public use or sale, and other bars to the grant of a patent.

At first sight, this would seem to be revolutionary, and the general objection to such change is that it would greatly add to the burdens now placed upon the parties in interference proceedings. This, however, is by no means so serious as it at first appears. Under the practice as it now stands, theoretically we try out the question of priority of invention only, but the patentability of the issue, the right of the parties to make the claims, and public use and sale are tried as collateral matters. In fact, the question of the right of a party to make the claim, or at least some phases of this question, may be tried both by dissolution and as a priority question. When it is remembered that the interference proper may under the present practice be suspended, and is, in fact, very often suspended, to try out the question of the patentability of the issue, or of the right of one of the parties to make the claim, in a collateral proceeding, which has in fact nothing at all to do with the question of priority, it will be apparent that the proposed change is not so revolutionary as at first appears. And when it is remembered that the interference may be, and sometimes is, suspended to try out in a collateral way the question of the public use and sale against one and sometimes both of the parties, it is obvious that it would not add greatly, if at all, to the burdens of the proceedings to let these questions be tried out as a part of the main proceeding.

Thus we now suspend the main proceeding to entertain a motion to dissolve, which is heard by another official, with the right to appeal to the examiners-in-chief, and to the Commissioner in person. If it be held that the issue is patentable and that the parties can make the claims, the interference continues. But the question of right to make the claims, although urged as a basis for dissolution, can be and is constantly raised at final hearing, so that the motion to dissolve, so far as this question is concerned, is not in any sense conclusive.

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It is true the examiner of interferences is not usually permitted to take up this question, except in the light of additional evidence; but nevertheless it does arise in one way or another more or less frequently.

Sec. 4915, R. S.: Of course, the mere change of Sec. 4904, R. S. in the manner proposed would not prevent retrying the questions of the patentability of the issue, public use and sale, etc., under Section 4915. Therefore it would seem advisable also to modify this section so as to restrict the cases which may be prosecuted thereunder to *ex parte* applications.

Priority: As illustrating the fact that the changes proposed would not be so fundamental as at first appears, it may be well to consider what matters may be tried out under the term "priority of invention." Fundamentally this of course means which of two parties first made the invention, but practically it means many other things; for instance, we may determine:

1. Priority of invention in its true sense; that is, which of the parties to the proceeding first produced the invention.

2. Originality; that is, which of two or more parties in fact produced the invention. This is not in its strict sense a priority question at all. And the examiner is permitted to determine only which of the parties was first in possession of the invention. It may be that either or both derived the invention from some third party, but this question can not be considered.

(Foster v. Antisdel, 88 O. G., 1527; 14 App. D. C., 552; Prindle v. Brown, 112 O. G., 957; 24 App. D. C., 114.)

3. The right of one of the parties to make the claims. Under this heading we may determine numerous questions, such as:

(a) The sufficiency of the disclosure of the application to support the issue.

(Podlesak and Podlesak v. McInnerney, 120 O. G., 2127; 26 App. D. C., 399.)

(b) The operativeness of the structure disclosed in the applications.

(Cosper v. Gold, 168 O. G., 787; 36 App. D. C., 302.)

(c) New matter in the application.

(d) In a reissue application the identity of the invention in the reissue with that claimed in the original.

(Nelson v. Felsing and Felsing v. Nelson, 142 O. G., 289; 32 App. D. C., 420.)

(e) The validity of the oath accompanying the application.

(Dalton and Magnus v. Wilson, 224 O. G., 741; 44 App. D. C., 249.)

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(f) Whether alterations have been made in the application after the same was sworn to.
(Lindstrom v. Ames, 168 O. G., 250; 37 App. D. C., 365.)

4. Estoppel: Under this heading the parties may raise:

(a) Res Adjudicata.

(b) Delay in making the claims.
(Rowntree v. Sloan, 227 O. G., 744; 45 App. D. C., 207.)

(c) Concealment after reduction to practice.
(Mason v. Hepburn, 84 O. G., 147; 13 App. D. C., 86.)

(d) Election to use the invention secretly instead of applying for a patent.
(Macbeth-Evans Glass Co. v. General Electric Co., 6th Circuit, decided Nov. 6, 1917, 246 F. R., 695; 248 O. G., 501.)

5. Disclaimer of the invention (Rule 107).
6. Abandonment of the invention (Rule 125).
7. Concession of priority to the other party (Rule 125).
8. Joint Inventorship. (Lemp v. Randall and Bates, 146 O. G., 255; 33 App. D. C., 430.)

When we consider the number and variety of questions which may be and are continually raised under the term "priority" of invention; and then remember that non-patentability is considered by motion to dissolve, with a line of appeals provided; and that public use may likewise be considered under certain circumstances; and, further, that any of these various matters may be raised *de novo* by bill under Sec. 4915, R. S., it is apparent that it would not be so long a step after all simply to amend the statute so as to give the examiner of interferences the power to decide all of these questions once for all, with a proper appeal to some superior tribunal.

It may be urged that one man could not supervise the work. This is not material; for if one can not, two or more should be provided. In fact, as the situation now is two law examiners are constantly engaged on preliminary interference matters in addition to the examiner of interferences himself. The question of force should not control. It is a simpler and more direct practice that is needed, and this the proposed change would provide.

Enlarged Authority: The constant shifting of the case, and the number of appeals allowed, are unnecessarily wasteful of the time of the officials of the Office. In a

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suit brought for the infringement of a patent, only one appeal is allowed; why should there be more in an interference case? While the changes suggested above would greatly simplify the procedure, the practice would still not be the best that is possible. An even better way would be for the examiner of interferences to have the powers of an assistant commissioner; that is, for the Commissioner himself to take direct charge of these cases, and conduct them with the aid of one or more assistants. He could then decide all questions involved, both direct and collateral, with an appeal on the whole case to the Court of Appeals of the District of Columbia. This would require the appointment of one or more additional assistant commissioners. But this again is largely only a question of salaries. As it is now, fully one-third, and perhaps more, of the time of the Commissioner and his assistants is devoted to interference cases. This work would then be applied directly, rather than by review. All decisions on preliminary and interlocutory matters would be final and conclusive, and the large number of appeals, with the necessary suspensions, would be avoided. In other words, the examiner, Commissioner, or whatever his designation, would be able to decide the questions presented once for all without continual review.

Preliminary Work: The preliminary work now done by one of the law examiners is well worth the time put upon it. But this work could be extended to great advantage. The patentability of the issue and the right of the parties to make the claims should both be very carefully investigated before the interference is declared. Work put upon the cases at this point, would save much time, labor, and expense later.

NOTICE TO SUBSCRIBERS.

The May issue of THE JOURNAL OF THE PATENT OFFICE SOCIETY contained some defective copies. Subscribers who received such copies are asked to write to the Business Manager, who will be pleased to forward properly assembled copies without charge.

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REPORT OF THE ALIEN PROPERTY CUSTODIAN.

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Note: The following matter extracted from the recently issued report of the Alien Property Custodian, Senate Document #435, and relating to his handling of foreign owned patents and alien controlled corporations owning patent rights, it is thought will prove of interest.

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The character of the business administered is matters relating to patents, also trademarks, prints, labels, and copyrights, all of which are to be understood as included under the general term "patents" wherever that term is employed herein.

No issue has been raised in instances where American users of patents are operating under contracts with or from enemy owners of United States patents as to whether such contracts are valid or were suspended or absolutely terminated or lapsed after war was declared by the United States. The policy has been to demand all royalties accumulated and accruing from time to time until license was obtained by such users from the War Trade Board or the Federal Trade Commission. As to the best measure of the value of the use of the patent there has been taken the arrangements made before the war and when conditions were normal between the user and the owner as to royalties or consideration.

Reports monthly, quarterly, semiannually, or annually, depending upon the nature of the case and the convenience of the user of the patent and of this division, have been required on special form in the nature of a questionnaire eliciting the source of the royalty, method of its measurement, selling price of the commodity, its general character, and cost of production. This is subscribed under oath and is comprehensive in character and embraces questions bringing out full information in the manner desired by the division.

Prior to the revocation by the President, on April 11, 1918, of the power enabling persons in this country to communicate with enemies, as provided for in the act regarding patents, no money belonging to enemy representatives or correspondents of American attorneys in patent matters was demanded. Since such revocation, however, such money has been demanded.

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No demand was made for patent rights prior to the amendment of the act approved November 4, 1918. Since the passage of this amendment, however, the Division of Corporation and Individual Property has made demands for patent rights where such were among the assets of corporations whose majority stock was enemy-owned and has been demanded, the amendment empowering the Alien Property Custodian to demand the transfer and assignment of enemy-owned patents, or even to seize them outright.

The Federal Trade Commission is vested with the executive administration of subsection (*c*) of section 10 of the act and may grant licenses, either exclusive or non-exclusive, as they deem best, provided in their opinion to grant such is for the public welfare and that the applicant is able and intends to manufacture, etc., a machine, etc., the patent of which is owned by an enemy. Such licenses may be granted to any citizen of the United States or any corporation organized within it. Where the public welfare is involved, the Federal Trade Commission prescribes the condition of the license, including the fixing of prices of productions necessary for the health of the military or naval forces of the United States or the successful prosecution of the war, and fixes the fees to be charged therefor. The licensee is required to pay, at such times as may be ordered, to the Alien Property Custodian a sum not to exceed 5 per cent. of the gross sums received by him from the sale or use of the patent or 5 per cent. of the value of the invention. This sum must be deposited by the Alien Property Custodian forthwith in the Treasury as a trust fund for the licensee and for the owner of the patent, out of which the claims of the owner may be wholly or partly satisfied under judicial proceedings, as provided in subsection (*f*) of section 10 of the act. The commission requires the licensee to file semiannually, on January 1 and July 1 of each year, and oftener if necessary, a full statement of the extent of the use and enjoyment of the license and of the prices received from the sale or use of the subject matter of it, and that within 30 days thereafter the licensee pay to the Alien Property Custodian the sums referred to above. Usually about 30 days in advance of the time the licensee is required to remit the commission advises the Alien Property Custodian of the date when

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remittance should be in hand. This advice is treated in the same respect as a formal report and given a trust number and administered as in the case of reports concerning other property belonging to enemies.

In certain cases where before the war persons were representing foreign owners of United States patents, later defined as enemies under the act, such persons, however, not manufacturing or operating under the patent, but representing the owner merely as agents, and sublicensing American users of the patents, the Federal Trade Commission, and or the War Trade Board, for the convenience of the Alien Property Custodian, granted licenses for the American agent to continue such representation, generally under the same conditions in force before the war. In other respects such licenses were on the same terms and conditions as to the Alien Property Custodian as licenses granted in other instances by the Federal Trade Commission or the War Trade Board. This division has advised persons who operated under a prewar contract to obtain a license from the Federal Trade Commission or the War Trade Board.

In all cases where patents were producing royalties the division has systematically collected such royalties, and kept a careful account thereof. The public has been consistently advised against, and discouraged from, treating enemy-owned patents as legitimate prey.

The following is in agreement between the Alien Property Custodian and the Federal Trade Commission—since April 26, 1918:

(1) The Federal Trade Commission will issue no licenses covering patents which are owned or controlled by a citizen of the United States residing in the United States, either as an individual, partnership, or other body of individuals.

(2) Before proceeding to the sale of any patents, control of which has been taken by the Alien Property Custodian, he will notify the Federal Trade Commission so as to give the latter the opportunity of expressing its views as to the desirability of the issuance of licenses.

(3) Should it be determined by the Federal Trade Commission and the Alien Property Custodian that it is desirable to issue licenses, such licenses shall be issued by the Alien Property Custodian directly, or by him through his representatives in charge of the business to which the patents belong.

(4) The Federal Trade Commission will issue licenses covering the use and operation of enemy-owned patents, unless it appears upon investigation that rights under such patents are vested in citizens or residents of the United States, in which case the matter will be taken up in conference between the

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Alien Property Custodian and the Federal Trade Commission.
(5) That the Alien Property Custodian and the Federal Trade Commission will cooperate by exchanging information in relation to patents and licenses.

It is believed that a great many enemy-owned patents bearing royalties have not been reported here. Among licensees under prewar contracts, the impression seems more or less current that they are not required by the act to file reports or to secure licenses from the Federal Trade Commision or the War Trade Board. When it is borne in mind that there are granted annually by the United States, approximately 35,000 patents, and that a search in the Patent Office for undisclosed enemy patents would require going back a period of 17 years, and that the results of such a search, even if made, would not be conclusive, since a patent issued in the name of a person now an enemy under the act, may have been heretofore and previous to the war assigned in good faith to an American citizen or a non-enemy; and that, on the other hand, a patent issued in the name of a citizen of the United States might, by like subsequent transfer, have its beneficial interest or even its legal title now in an enemy, the difficulties and the magnitude of the task of trying to get in complete report and data on enemy-owned patents can be appreciated.

The relation of this division to other divisions and the method of making demands, keeping records, and general procedure, is the same as that obtaining in other divisions. It should be observed that demands, previous to the amendment of November 4, 1918, hereinafter referred to, being chiefly for royalties, were for cash items.

The activities of this division during the first few months of its existence were greatly restricted and considerably hampered by the very narrow powers given to the Alien Property Custodian under the act as it stood prior to its amendment. The custodian was by the act virtually confined to the collection of royalties accruing under licenses granted by the Federal Trade Commission, or existing by virtue of prewar contracts, and to exercising general supervision over the administration of the patent and similar properties owned by the several companies controlled by the custodian by virtue of his stock ownership as outlined above. In pursuing this line of activity the patent division, coöperating with the

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Bureau of Investigation, caused a large number of existing licenses to be reported and has collected considerable sums of money as royalties under existing licenses and under licenses issued by the Federal Trade Commission. The royalties collected under existing licenses established by prewar contracts form part of the general fund deposited by the custodian in the Treasury, but the sums collected under licenses issued by the Federal Trade Commission are subject to the provisions of section 10 of the act.

When the policy of Americanizing German-controlled industries in the United States was determined upon, and the amendment of March 28, 1918, permitting the sale of enemy property in the United States to American citizens was enacted, it became apparent that in the great majority of cases no thorough Americanization of the several industries could be effected unless the custodian was placed in the position of being able to seize and sell to American purchasers the patents upon which the industries in this country were based.

The great majority of enemy-owned industries in the United States are chemical or manufacturing industries producing patented products under United States letters patent which cover inventions originated in Germany.

An important aid to the success of German export trade in dyes and phamaceuticals was the advantage taken of the patent laws of the several countries. Owing to the immensely greater number of research chemists engaged in this work in Germany than in other countries, far more patentable inventions in organic chemistry were made by the Germans than by the chemists of any other nation. In the United States alone they took out patents by the thousand. For example, Bayer alone accumulated in the neighborhood of 1,200 such patents which were placed in the hands of one of its subsidiary companies. The Badische had approximately 500 such patents, while each of the other members of the cartel held patents by the score. As there was substantially no effort (with small exceptions) by any of the German concerns to manufacture in the United States, these patents were obviously obtained and held in order to prevent the formation of an American dye industry and to make impossible importation from other countries. The latter

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of these two purposes seems to have been the more important in the German mind. They seem to have had no fear that any American industry could be established on a competing basis. They had, however, some respect for the Swiss, French, and English industries, though at the time of the commencement of the European war Germany was supplying approximately nine-tenths of the world's needs in dyes. With the aid of the patents, especially the product patents, they could and did exclude all importations of competing dyes in the most important classes.

It may be stated that of the approximately 200 corporations controlled by the Alien Property Custodian, at least 125 are manufacturing corporations, manufacturing patented articles, and that of these 125 at least 75 manufacture under patents owned or controlled by enemy aliens. Investigation showed that the usual course pursued by an enemy in establishing a business in this country was to incorporate an American company, the stock of which the enemy controlled, and to issue a license to the American company under patents owned by the enemy. In this way the enemy was enabled to control the American corporation, not only through his stock ownership but also through his ownership of the patents, and was enabled to collect a large part of the profits of the American corporation under the guise of royalties for the use of the patents, rather than as dividends upon its stock. This dual control of the American corporation had the advantage, from the point of view of the enemy, of permitting him to shut down the business of the American corporation in the event of his losing control of stock and also permitted him to evade payment of income taxes by taking his profits under the guise of royalties, thus largely decreasing the apparent earnings of the American corporation.

In the case of the Bayer Co. (Inc.) and the Synthetic Patents Co. a series of license agreements was found to exist under which the American company was bound to pay upward of 75 per cent of its net earnings to the enemy by way of royalties. In the case of the Heyden Chemical Works royalties consumed all of the profits of the American company, except sufficient to pay a dividend upon its preferred stock. In the case of the Bosch Magneto Co. practically the entire profits of the Amer-

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ican company were taken from the corporation under the guise of the payment for the purchase of enemy-owned United States patents.

In connection with the sale of the enemy stock in this company, the enemy-owned American patents, important to, and used with the business, were also sold. These patents, of which there was a considerable number, cover every conceivable phase of invention and improvement in the art and embody the ideas of the best and most experienced German engineers in this branch of electrical science. By their seizure and sale in conjunction with the producing units—the factories—the American purchasers and the industry generally are insured against German competition within the field covered by the patents.

As a result of these proceedings, the magneto industry in this country is now wholly in American hands and is unfettered by patents held by or for the benefit of enemies. It seems reasonably safe to predict that the business will remain indefinitely 100 per cent. American.

The extent of this control may be further illustrated by the case of the C. P. Goerz American Optical Co., which operated under approximately 80 United States patents, all of which were owned by the enemy parent company, and under which the American company held a license revocable at the will of the German company. The German company was thus placed in a position of being able to at any time revoke the license and shut down the American manufacture should the American company get out of control.

It was thus seen that in the great majority of cases the American corporation would be absolutely unsalable under the provisions of section 12 of the act as amended, unless the custodian were in a position to relieve the American company from the burden of the German-owned patent monopoly. It was obviously impossible to sell the Bayer Co. to a purchaser burdened with the obligation of paying upward of 75 per cent. of its earnings, or to sell the C. P. Goerz American Optical Co. to an American purchaser who would find himself operating under a license which might be revoked at any moment. The act as it then stood seemed to offer no solution to the difficulty, since applying to the Federal Trade Commission for a license under the provisions of section 10 of

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the act would not relieve the American company from the burden of prewar licenses, and would in any event subject the purchaser to the payment of a royalty to the German patent owner, which royalty would be under the terms of the act reviewable after the war. It was realized that the purchaser of an American business must be free from the entanglements that the enemy created while the American corporation was in enemy control, and that the purchaser must in any event be certain of the extent of his obligations before purchasing a business from the Alien Property Custodian.

When the Custodian came to carrying out his selling program, however, he met with two very serious obstacles. He found that some of the most important of the German-owned industries in this country were operating under patents issued by the United States Government to German subjects, which patents were being used and enjoyed by the American corporations owned by the enemy, and which had never been formally assigned and were still the property of the German subjects. He found, further, that Germany had taken out thousands of American patents upon articles produced under similar patents in Germany, for the sole purpose of preventing the manufacture of the patented article in this country, and thereby forcing the importation of the German product into the American markets.

The prevailing legal opinion was that patents were not included within the enemy property which under the Trading with the Enemy act as it was originally enacted and amended on March 28, 1918, were subject to seizure and sale by the Custodian. That opinion prevailed because of the specific treatment given to patents, copyrights, trade-marks, and other similar species of property by section 10 of the act. The only power in reference to these species of property was the power conferred upon the President to license their use within certain limits that were defined, and those licenses might be either for a fixed term or for the life of the patent, as the Federal Trade Commission, to which the President delegated the powers of section 10, might decide. But any license so granted became subject to judicial review after the end of the war as to the license fees paid thereunder; and the section went further to the extent of authorizing the court, if it thought proper so to do, to cancel

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the license in its entirety. Many of the corporations whose stock was entirely controlled by enemies during the period of their enemy control enjoyed the benefit, not merely of one American patent, but in some cases of as many as 80 or more American patents, which, however, were owned by enemies, who either by license or otherwise had permitted the American corporation to use these patents. But where a license was granted it was revocable at the will of the German owner, and gave no vested or enforceable right to the future use of the patents. Each license would subject the licensee to a separate suit after the war by the German owners for the purpose of determining the value of that license. Such a situation was intolerable, and limited the number of persons who would consider becoming the purchasers of the stock in such a corporation, and therefore made it impossible for the Custodian to obtain the real value of that plant. Furthermore, it was obviously impossible for any prospective American purchaser to have his patent attorney examine the title to some 80 patents and determine what the outcome of such a litigation might be with sufficient assurance for the prospective purchaser to determine the value of the business in advance of a decision in the after-the-war litigation. Consequently under the provisions of the original act the Custodian faced the possibility of being required to sell American corporations to American citizens, divested of their chief assets; and more than that, of subjecting the American purchaser to ruinous competition with the cartel-controlled industries of Germany in some lines where American markets have been closed to American producers by German patent monopoly here.

The other obstacle which the Custodian encountered was the difficulty in making title to American purchasers of stock, because the certificates representing the enemy ownership were beyond his reach, being in the strong boxes of the owners in the enemy countries.

By an amendment to section 7 (*c*) of the Trading with the Enemy act, contained in a deficiency appropriation act approved November 4, 1918, both these obstacles were removed. The Alien Property Custodian was thereby empowered to demand and take over enemy-owned patents and to require corporations to issue to him new certificates of stock in lieu of certificates which can not

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be produced for transfer by reason of their being in the enemy country.

The amendment of November 4 to the Trading with the Enemy act presented for the first time an opportunity for what appears to me to be the most important piece of constructive work which has been possible in my department. Until the enactment of this amendment it had not been possible to take over German patents. These patents, as had been already indicated, formed a colossal obstacle to the development of the American dyestuff industry. Evidently they had not been taken out with any intention of manufacturing in this country or from any fear of American manufacture, which the Germans apparently thought could not be successfully carried on under conditions prevailing in this country in regard to costs and to the supply of technicians and skilled labor. Upon consideration, however, it seemed that these patents offered a possible solution for the problem, hitherto unsolvable, of protecting the new American dye industry against German competition after the war. If they were not taken out in order to prevent American competition they must have been obtained as a weapon against competing imports. If they were sufficient to stop importation of competing Swiss, French, and English dyes, they would presumably serve, in American hands, to stop the importation of German dyes. This was particularly probable in the case of the product patents, since most of the coal-tar dyestuffs are definite chemical combinations to which a product patent is entirely applicable.

The idea was accordingly conceived that if the German chemical patents could be placed in the hands of any American institution strong enough to protect them, a real obstacle might be opposed to German importation after the war, and at the same time the American industry might be freed from the prohibition enforced by the patents against the manufacture of the most valuable dyestuffs. Accordingly, these considerations were laid before various associations of chemical manufacturers, notably the Dye Institute and the American Manufacturing Chemists Association. The suggestion was met with an instantaneous and enthusiastic approval, and as a result a corporation has been organized to be known as the Chemical Foundation (Inc.), in which practically

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every important American manufacturer will be a stockholder, the purpose of which is to acquire by purchase these German patents and to hold them as a trustee for American industry; "for the Americanization of such institutions as may be affected thereby, for the exclusion or elimination of alien interests hostile or detrimental to the said industries and for the advancement of chemical and allied science and industry in the United States." The voting stock is to be placed in a voting trust of which the trustees are to be the five gentlemen who for months have been acting as the sales committee which passes upon sales made by my department, that is to say, George L. Ingraham (former presiding justice of the appellate division, first department, New York Supreme Court); Otto T. Bannard (president, New York Trust Co.); Cleveland H. Dodge; Benjamin H. Griswold (senior partner of Brown Bros.' bankers, Philadelphia); Ralph Stone (president, Detroit Trust Co.), and the charter is so framed that under the patents nonexclusive licenses only can be granted on equal terms to all proper applicants, and must be granted to the United States free of cost. The company is capitalized at $500,000, of which $400,000 is to be 6 per cent cumulative preferred stock and $100,000 common stock also limited to 6 per cent dividends. The first president of the Chemical Foundation (Inc.), will be Francis P. Garvan, of the New York bar, to whose clear vision and indefatigable industry I am chiefly indebted in the working out of this plan. By Executive order obtained under the provisions of the act, I have sold to this company for the sum of $250,000 approximately 4,500 patents, the remaining $250,000 has been provided for working capital so that the company may be able to commence immediately and prosecute with the utmost vigor infringement proceedings whenever the first German attempt shall hereafter be made to import into this country. The charter of the corporation provides that surplus income is to be used for the retirement of the preferred stock and thereafter for the advancement of chemical and allied science and industry. The price thus paid was necessarily determined somewhat arbitrarily; the great majority of the patents were presumably valueless. The value of the remainder was entirely problematical and impossible to estimate. Substantially the entire industry having combined for the

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purpose of this purchase, it would have been impossible on public sale to find as a bidder any legitimate manufacturer. No other bidder could, therefore, have been found on public sale except some speculative individual who might have bought them for purposes practically amounting to commercial blackmail. The combination was not objectionable to public policy since it was so organized that any genuine American, whether a stockholder of the company or not, could secure the benefits of the patents on fair and equal terms.

It is submitted that the organization of this institution constitutes the most important step that has been taken for the protection of the new industry. Tariff protection has proved utterly unavailing in the past. The German industry as hitherto organized, and still more as now organized, has had so much to gain by extending its foreign trade and by destroying the industry in other countries that it would undoubtedly give away its goods in this country for nothing in order to recover the American market. The Chemical Foundation, however, should prove a power sufficient to discourage in a most effective manner any German attempts in this direction. If, as their newspapers boast, the Germans have during the war worked out entirely new dyes superior to their past productions, the protection afforded by it will be invaluable. It has been the uniform experience of the industry that the introduction of new classes of dyestuffs follows only several years after the patenting of the original inventions on which their manufacture depends. Accordingly, the later dyes of today depend largely upon the patents of three or four years ago. The patents transferred to the Chemical Foundation include many German patents of 1917 and even of 1918, and also many applications still pending. These patents undoubtedly include the results of the research upon which must be based the manufacture of any new dyes which the Germans are now able to produce and market. Accordingly, at the very least, the institution will be able to protect the American industry for a considerable period, and this should be all it needs. It appears to be the universal view of the more competent manufacturers in this country that given five years of freedom from German competition, the American industry can hold its own. Probably only a measure such as the embargo which appears

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to have been imposed by the British and French against all foreign dye importations can furnish this protection to the degree necessary to insure the safety of the American industry; but short of such an embargo, the Chemical Foundation would seem to furnish all the aid that possibly can be given.

At the same time the new institution promises an incalculable benefit not only to the dye and chemical industries but to the whole American manufacturing world. The opportunities which it can offer and the rewards which it can hold out to competent research scientists should far exceed those of any institution unconnected with industry, and it may well, therefore, form the nucleus of the greatest research organization in the country.

Acting under the provisions of the amendment of November 4, 1918, the Custodian has proceeded to Americanize thoroughly all of the industries sold by him, by relieving the industries of the burden of licenses entered into prior to the war, and by conveying to the purchaser the patents through which the enemy companies controlled their American subsidiaries. This procedure has the effect not only of cutting off the payment of tribute to the enemy companies under licenses, but also places in the hands of the American purchasers the weapon to protect the industries from enemy invasion after the war. The purchaser is thus placed in the position of being able to use against the enemy, to prevent importation by him after the war, the very means that the enemy was using to prevent competition by the American manufacturers with his American subsidiary.

It may be stated, by way of example, that in the case of the Bayer Co. (Inc.), approximately 550 enemy-owned patents were sold with the stock of the company to the American purchaser; in the case of the Bosch Magneto Co. approximately 130 patents were sold; and in the case of C. P. Goerz American Optical Co. about 80 patents will be sold when the stock of this corporation is disposed of by the Custodian.

Whenever any American manufacturing business which is likely to be operating under patents is to be sold, an investigation is conducted to determine what, if any, license agreements exist between the American company and its enemy parent, whether the patents standing in the name of the corporation are fully vested in it and

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what enemy-owned patents exist which are owned or controlled by the enemy parent corporation or by its principal owners and which are related to the business carried on by the American company. Prior to the sale all of the rights and benefits accruing to the enemy under such license agreements, and all of the letters patent relating to the business standing in the names of enemies, are seized by the Custodian, and at the sale of the business such rights and patents are sold to the purchaser of the stock of the American company. The American purchaser thus in effect steps into the enemy's shoes, and can protect the American company against the patent monopoly theretofore exercised by the enemy, and exercise the former rights of the enemy under the patents to exclude the enemy from competition by importation.

An important branch of the work of the Patent Division of the Alien Property Custodian's office has been the transfer of enemy patent rights to the Government of the United States, thus enabling the carrying on of certain governmental activities without interference from enemy patent owners and releasing the Government from very substantial claims for damages for past infringement of such patents. The largest single transaction of this kind was the sale to the Navy Department of the wireless station at Sayville, Long Island, formerly owned by the Atlantic Communication Co., the American subsidiary of the Gesellschaft fur Drahtlose Telegraphie, m. b. H. (commonly called the Telefunken company), and of all the United States patents covering the Telefunken system of wireless telegraph in this country, aggregating some 97 patents and 10 applications for letters patent. There were also transferred to the Navy Department at the same time all of the other enemy-owned patents relating to radiotelegraphy found in a search made in the United States Patent Office, and the patent rights of the New York Patents Exploitation Corporation, an enemy controlled company which was found to be holding certain valuable patent rights for the benefit of the Atlantic and Telefunken companies.

My Bureau of Investigation found that the Telefunken interests had pursued the usual German course in respect to the wireless patents. The ownership of the legal title remained in the Germany company. The Atlantic Communication Co. had only a license to use the

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devices and so the wireless development here was always under German control. In due course, I seized all the German interests in these patents and disposed of them concurrently with the rights of the Atlantic Communication Co. In three cases the legal title to the patent or license was in the Atlantic Communication Co. This was due to the fact that the rights had been acquired after the plan to give an American appearance to the wireless enterprise had been some time in operation. Two of these three rights were of substantial importance. One (the Seibt patent) covered an important unit of a wireless transmitter; another (the Vreeland license) a receiver of wireless impulses. The third was of minor value, but of interest because it was the invention of Reuthe, a Telefunken engineer, who had worked it out at Sayville. Reuthe afterwards went to Mexico and is said to have been in charge of German wireless interests there.

When war with the United States was imminent, some of the Telefunken representatives in Atlantic Communication Co. organized a new company under the laws of New York and called it the New York Patent Exploitation Corporation. They induced a number of persons to become stockholders, and thus had a company in their control which was one step further from Telefunken and Germany. To this new company there were transferred the three patent rights (and none other) which had been described as being in legal ownership of Atlantic Communication Co. The inclusion of the Reuthe patent with the other two which were of actual use indicated that the purpose of the transfer was to get into more clearly American hands all the patent rights that could not be controlled by reason of the German ownership of the legal title. The purpose was not "exploitation" (as the name suggests) but protection. This seems the more clearly shown by the failure of this new company to make any effort to acquire other devices which would permit the use of the three devices it owned.

There is evidence that the Telefunken interests had on foot a comprehensive scheme of consolidating all the wireless patents. They were dealing with De Forest, with Marconi, and with the National Electric Signaling Co. The consolidation was put forward as a means of putting an end to ruinous patent litigation, but in all

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the plans the Telefunken interests were to have a majority of the stock of the holding company.

After consideration of the facts respecting the New York Patent Exploitation Corporation, an offer was made to the stockholders to turn over their stock at the amount invested in it with 6 per cent interest. This offer was accepted. The New York Patents Exploitation Corporation then entered into negotiations with the United States Government to sell to it the three patent rights described. I had learned that the Navy Department had acquired a number of wireless patents and properties and was contemplating other purchases. The instant need of Government use and control of wireless shore communication seemed to have been demonstrated by this war and I offered the rights acquired by me simultaneously with the offer of the New York Patent Exploitation Corporation. The directors of the Atlantic Communication Co. also entered into the negotiations with the result that there was conveyed to the United States of America, through the Navy Department, the entire Sayville plant and all the patent rights of the Telefunken (German) company and also of the two American corporations.

In connection with the sale of the Locomotive Superheater Co. to stock of the United States Railway Administration the Government is given the beneficial use of approximately 105 patents of great value relating to superheaters, valves, steam boilers, and other apparatus relating to locomotive construction and equipment.

Minerals-Separation Agency.

The history of Beer, Sondheimer & Co.'s activities in the United States would not be complete without mentioning its connection with the various minerals-separation companies.

What Minerals Separation Means—the Patents.

The various minerals-separation companies have successively claimed to own patents covering an improved process of ore concentration. Ore concentration in metallurgical operations is the separation of the mineral or metallic part of the ore from the nonmetallic or worthless material found associated with it in nature, in order

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that the valuable metallic particles may be in proper condition for the subsequent process of smelting. Hence the name "minerals separation."

Expressed in language which laymen can understand, this new process may be described as the addition of a very small quantity of oil to the ore pulp (which is ore finely pulverized floating on water) followed by vigorous agitation of the pulp, and the introduction of air currents into the mixture resulting in the development and distribution throughout the mixture of small bubbles of air which attach to themselves the valuable metallic particles and with them rise to the surface forming a mineral froth of such coherency as to afford full opportunity for its removal from the surface for further treatment of the metallic particles, while the worthless material sinks to the bottom.

Prior to the invention of this new process, ore concentration, or the separation of the mineral from the useless parts in ore, was effected by the water or gravity process. In that process the ore was mixed with water forming the ore pulp; the pulp was shaken, thereby separating the metallic particles from the worthless parts of the ore, and the metallic particles being heavier than the water, sank to the bottom, while the worthless particles being lighter than the metallic particles, though heavier than the water, were subjected to an up current of water which carried the worthless particles to the surface and over the container. The old process was commercially unsuccessful because it permitted a large percentage of the metal in the ore to be carried off with the worthless particles. The material thus rejected was called slime. For years dumps consisting of millions of tons of such slime, which were known to contain a large percentage of metal, lay useless because there was no known process by which they could be treated and the metal extracted.

In 1906, Henry Livingstone Sulman, Hugh Fitzalis, Kirkpatrick Picard, and John Ballot, all of London, England, claiming to be the inventor of the new process, obtained a patent thereon in the United States. In 1910, Sulman and Henry Howard Greenway and Arthur Howard Higgins, all of London, obtained another patent in the United States, and in 1914, Greenway, then of Melbourne, Australia, obtained a third patent in the Unit-

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ed States, the latter two patents involving the same process as the first one, but including improvements thereon. These patents run for a period of 17 years from their respective dates.

In 1905, and before the first United States patent was obtained, the patentees obtained a patent in England exactly similar to the first United States patent. The validity of the English patent was attacked in the English courts, but was sustained by the House of Lords. (Minerals Separation (Ltd.) v. British Ore Concentration Syndicate (Ltd.), 27 R. P. C., 33.)

In 1903, Minerals Separation (Ltd.), which will be hereafter designated as the parent company, was formed under the English law. The three United States patents were assigned to this company.

In 1910, the parent company having acquired the United States patents, and similar patents obtained in Canada and Mexico, conveyed these patents to a corporation called Minerals Separation American Syndicate (Ltd.), for the purpose of enabling the American syndicate to exploit these patents in America. This, too, was an English corporation.

In 1911 the American syndicate made a contract with Beer, Sondheimer & Co., whereby it gave to that firm the exclusive agency to represent the syndicate in America. For reasons which are unimportant to the present inquiry, this first American syndicate was soon dissolved and a new syndicate was formed, called Minerals Separation American Syndicate (1913) (Ltd.). This, too, was a British company. The 1913 syndicate renewed the agency agreement of Beer, Sondheimer & Co., and appointed that firm sole agents to conduct all of the syndicate's commercial affairs in the United States, Canada, and Mexico, the agency to continue for a minimum period of 10 years with a provision for renewal for the rest of the life of the patents. Beer, Sondheimer & Co. were to receive a commission of 10 per cent of all gross royalties received for the use of the patents and 10 per cent on all profit-sharing business (the syndicate intending not only to give licenses, but also to buy up and treat ores), and also a percentage as a commission of the sale of products so treated by the syndicate.

When the agency agreement was made Beer, Sondheimer & Co. had an American branch of its business in

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New York City, which was in charge of Benno Elkan and Otto Frohnknecht, and was being conducted under the name of Beer, Sondheimer & Co., American branch. The parties entered into the performance of the agreement, and inasmuch as most if not all of the business was done in the United States the agent's end of the business was conducted by the American branch of Beer, Sondheimer & Co.

In addition to having the exclusive agency, Beer, Sondheimer & Co. were also stockholders of the 1913 syndicate, owning 32,615 shares of said stock. In 1916 the property of the 1913 syndicate was conveyed to an American corporation called Minerals Separation North American Corporation, and each stockholder became entitled to two shares of the American corporation's stock for each share of the 1913 syndicate stock.

The importance of the control by this German-owned branch of Beer, Sondheimer & Co. of the minerals-separation process, and the power to grant or withhold from the United States metal-industry licenses to use the flotation process, can hardly be overestimated. The Custodian, as will be pointed out later, has taken over all of the minerals-separation stock held by Beer, Sondheimer & Co., and the latter's control of the minerals-separation process in the United States has broken.

When the Bayer company was sold, the Alien Property Custodian reserved from the sale four patents and three applications relating to a composition used for airplane "dope" and sold the property subject to an agreement on the part of the purchaser to issue to the Bureau of Aircraft Production a license and release of all claims for damages for past infringement under such letters patent and applications, at a price to be agreed on between the Alien Property Custodian and the Aircraft Production Board. The Alien Property Custodian is now coöperating with the Ordnance Department and other departments of the Government to effect the conveyance to such departments of all enemy-owned patents which may be required for their future operations, and to release these departments from claims for past infringement of enemy-owned patents. As soon as these departments furnish the Alien Property Custodian with the necessary information, the patents desired by the departments will be immediately seized and convey-

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ed to them, or licenses and releases will be issued, as the case may require. It is hoped that all of the departments of the Government will take advantage of the possibility of extinguishing claims for infringement and securing immunity for further manufacture provided by the act.

It is hoped that other industries which may be injuriously affected by enemy-owned patent monopolies in the same manner as the dye and chemical industries will endeavor to take similar action, and in this way assist in the Americanization of their industries and their relief from enemy-owned patent monopoly.

Other classes of property handled by the Division of Patents have also considerable importance and have produced substantial payments by way of royalties.

The trade-mark property of enemies in this country has been quite extensive, particularly in the drug industries, and the sums paid by Americans for the use of such enemy trade-marks in the United States has attained very substantial amounts. A notable case of this character is the trade-mark "Pebeco," under which royalties aggregating $157,033.50 have been collected up to the present time.

Copyrights, particularly plays and musical compositions, have also been a considerable source of revenue.

There are printed in the appendix certain schedules showing respectively patents conveyed to the Government either by direct sale or the sale of the stock of a corporation controlling such patents, and patents under which the Government has been released from claims; patents relating to businesses which have been sold to the American purchasers of such businesses; patents owned by corporations, the stock of which was enemy owned and has been seized by the Alien Property Custodian, but not yet sold; and license fees collected under prewar licenses given by owners of patents and under licenses granted by the Federal Trade Commission since the beginning of the war. The schedules do not, however, include upwards of 4,000 patents and trade-marks conveyed to The Chemical Foundation, Inc., it having been impossible to complete the listing of these patents and trade-marks up to the present.

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ANOTHER PLAN.

The following interesting plan for increasing the revenues of the Patent Office has been suggested by one of our readers:

According to the latest statistics there are about 40,000 patents granted every year by the U. S. Patent Office. It would be safe to consider 5% of them as successful ones, which means that about 2,000 patented articles or processes are brought on the market every year which bring a profit to the inventor or his assignee, either in royalties or through protection against competition. Let us assume that the average clear profit, through the patent-granted protection, of these 2,000 successful patents would only bring $2,000 a year each (in reality the average must be much greater, since there are individual patents bringing to their owners more than a million yearly).

My suggestion is that an amendment be made to the present laws whereby the owner of the patent could obtain an extension of the grant for one year on condition that he divide the profits accruing directly from the patent protection with the Government. Application would be made before the expiration of the original term, setting forth under oath that at the end of the year's extension, a true record and statement of all the profits derived directly from the patent protection (not profits of the regular business course) would be furnished.

If only half of the 2,000 successful patent owners would take the opportunity of this option of extending the term and file for an extension, and if their average yearly profit from the patent was considered at $2,000, that would mean a yearly income to the Patent Office of $1,000,000.

You can see how simple such a plan will be and how a continuous flow of money will come in to the Patent Office without even having to go to Congress begging for it.

It is clear that where royalties are paid out and received on patents, the 50 per cent. or whatever it may be, could easily be figured out and collected at the end of the extended year. But certain difficulties will arise

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when it comes to ascertaining how much is the profit derived from a patent due only to the protection against competition and not including the regular business profits.

What I have outlined here are only hints and far from a concrete, perfect plan of how the amended law should be framed and worked to the best advantage of all concerned—Patent Office, patent owner and the public.

It might be necessary to extend the term for *more* than *one* year, or to make the extension obligatory with a fixed small per cent. of the gross profits derived directly from the patented article during the extended term, or any other agreement suitable to all parties and the public. Of course, I do not mean compulsory working of the patent in the extended year. The United States patent law should be kept, as it is now, the most liberal system in the world in this respect.

How much progress and improvement the Patent Office would be able to make, if plenty of money for it were obtainable, I do not need to state. You know best, and in publishing the above suggestion, you will have a chance to dwell more fully upon this.

One more thing I want to point out is—if such a policy should be adopted, indirectly a complete record of successful patents in the U. S. would be available, which would be of great service to industries and the Government.

ISAIAH N. ZELLER.

BOOK REVIEW.

The Bobbs-Merrill Company, Indianapolis, Indiana, has just published Barnes' Federal Code, a complete compilation of all U. S. Statutes of a general nature in force in January, 1919, a handy one volume, flexible, gilt edge edition, edited by Uriah Barnes, and printed on opaque Bible paper, in clear readable type. The Revised Statutes, Statutes at Large, Session Laws, and Slip Laws necessarily contain many acts that duplicate or repeal former acts. In eliminating such laws not in force, and in logically classifying the laws according to subject-matter on the basis of the Revised Statutes and Statutes at Large, the editor, together with his able as-

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sistants, has given a valuable compilation to the busy lawyer who wants to know the law and where to find it in the easiest and quickest manner, for in the comprehensive index the headings are arranged in a manner to afford ready access to the statutes.

It contains the Judicial and Criminal Codes and the recent war legislation and tax laws.

Readers of the JOURNAL will be particularly interested in the chapter entitled Patents, Trade-Marks and Copyrights, and in the index of laws under their popular names in which we find such familiar terms as the Adamson Act, Overman Act, Espionage Act, Federal Reserve Act, etc.

The historical notes on the Constitution of the United States present a choice collection of interesting and valuable items of information, that enable the reader to determine instantly the parts of the Constitution that have been modified or superseded by amendments.

OF PERSONAL INTEREST.

We regret to record the death of Dr. Loren A. Sadler which occurred May 8 after an illness of several months. Dr. Sadler was formerly primary examiner in charge of Div. 12 and resigned March 12 of this year. He was appointed July 1, 1898 from Cleveland, Ohio, and was promoted through the several grades to his last position, which he attained Nov. 16, 1914. He had been in Div. 12 as assistant examiner since October, 1900 and had a thorough knowledge of all the work handled therein, which has been exceptionally heavy the past few years. He was considered a most excellent chief and examiner and his death is counted a personal loss by his very many friends in the Office.

Further recent losses to the Examining Corps may be chronicled as follows:

Mr. Victor Cobb, second assistant examiner, resigned May 1 to enter the employ of the United Shoe Machinery Co., at Boston, at a largely increased salary. Mr. Cobb was appointed fourth assistant examiner, from Massachusetts, on Dec. 1, 1909, and made second assistant Aug.

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24, 1916; his service was continuous in Div. 4 and his place will be difficult to fill.

Mr. A. M. Pederson, third assistant examiner, also resigned May 1; he has entered the employ of Mr. S. B. Prentiss, patent attorney, of this city, yielding, like so many others, to the allurement of increased salary. Mr. Pedersen was a native of Denmark; appointed to the Examining Corps July 1, 1916 from Connecticut, and promoted to third assistant examiner July 3, 1918. He resigned on the same day to enter the military service, in which he remained until reappointed to the Office on Dec. 12, 1918. He was a trained chemist and served in Div. 31.

Mr. George G. Hyde, another third assistant examiner, resigned May 10, going to New York City to enter the employ of Meyers, Cushman & Rea, of course at an increased salary, and with excellent prospects. Mr. Hyde is a member of the New York bar. He was appointed to the Office May 14, 1917 and promoted Feb. 16, 1918. With the exception of about three months spent in the military service last fall, he has been in Div. 24 since appointment.

Mr. Merrill M. Blackburn, a second assistant examiner, resigned May 31 to associate himself with Parkinson & Lane, of Chicago. As he originally came from the West (Iowa), this is going back home, to him. He was appointed Dec. 8, 1908 and made second assistant Nov. 2, 1914. He served in Divs. 7, 27 and 3 and was well known throughout the Corps.

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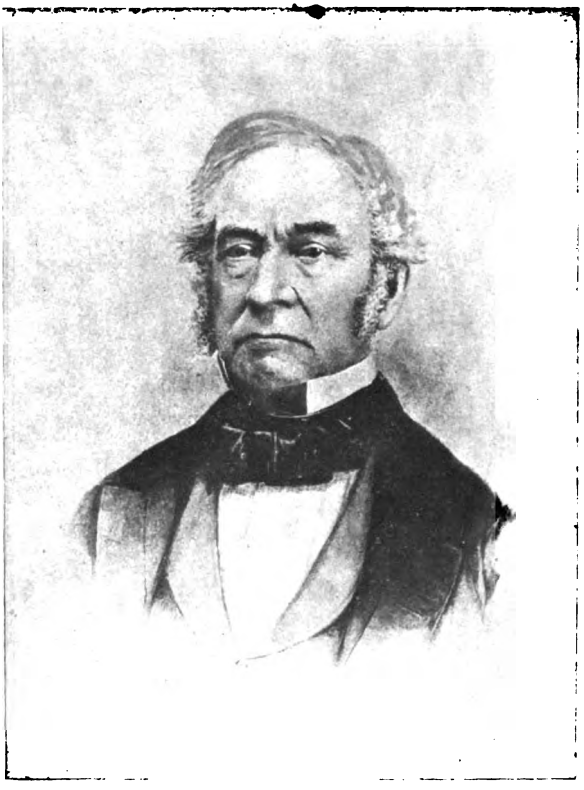
Two years experience in patent work.
Thorough scientific training.
Two years, George Washington University Law School.

Age, twenty-seven years.

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HENRY L. ELLSWORTH,
The First Commissioner of Patents.

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EDITORIAL.

CAMPAIGN NOTES.

It is with great pleasure we call attention to the report of the Committee on Patents of the National Association of Manufacturers presented at the twenty-fourth annual meeting at New York in May.

This report favorably reviews the work of the Patent Committee of the National Research Council and approves with emphasis the remedial legislation proposed by the Council committee. The members of the Manufacturers' committee, Milton Tibbetts, chairman,

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with Arthur C. Fraser and Nathan B. Williams, express their belief that the bills creating a single court of patent appeals, making the Patent Office a separate institution, and providing for increases in the force and salaries of the Patent Office, by proper presentation to Congress, can be placed on the statute books at this next session.

The report is printed in pamphlet form and has appended thereto the Council Committee report and the proposed bills to carry into effect the recommendations in said report.

—■—

Our own campaign, the inauguration of which was sketched in the editorial column of the June number of the JOURNAL, appears to be making its impression. At the moment of writing, about fifty replies have come in from engineers, inventors and others, voicing approval of the campaign and giving evidence of support. Many letters enclose copies of communications already sent to Congressmen, and a few favorable replies from the latter are already on record.

Among those manifesting special interest may be mentioned—

MILLER REESE HUTCHISON, Asst. to the President, Naval Consulting Board.

JOHN HAYS HAMMOND, JR., Inventor and Engineer.

W. A. DOBLE, Pres., Doble Laboratory, San Francisco.

WILLIAM J. KENT, Development Dept., U. S. Rubber Co.

Examiner Giles, who has taken Mr. Tullar's place at the head of the subcommittee on publicity, reports encouragingly on the progress of the campaign, citing specifically the example of an attorney at the head of the patent department of one of the largest electrical and manufacturing industries in the country, who has brought this matter to the attention of the Electrical Manufacturers' Club at a recent meeting in Hot Springs, Va.

The subcommittee proposes to continue the distribution of literature to persons likely to be interested or who could be influential with members of Congress; it asks suggestions from readers of the JOURNAL, identifying such persons.

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The campaign, so auspiciously begun, must be followed up unremittingly; especially must efforts be made to acquaint the committees on Patents and on Appropriations in both Houses of Congress with the standing and condition of the patent system and the Patent Office and the nature and necessity of the proposed legislation.

—■—

In the September, 1918, number of the *Journal of the American Ceramic Society*, published at Easton, Pa., appeared an editorial on the patent situation, reflecting rather severely on the work of the Patent Office, alleging the grant of many invalid patents relating to the ceramic art.

In the April, 1919, number of the same journal there is printed an answer to the editorial by Assistant Examiner George E. Middleton, who is a trained ceramic engineer. The answer admits the need of some reforms, explains the function and working of the Patent Office, and improves the opportunity to set forth the present plans for improving the system and helping the Office. Attention is called to this work by Mr. Middleton in the hope that others, examiners and attorneys, may be prompted to meet any attack on the patent system or Office by a similar reply. Any publication printing an "attack" will doubtless be willing to publish an "answer."

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HENRY L. ELLSWORTH,

The First Commissioner of Patents.

By WILLIAM I. WYMAN.

On May 12, 1835, Henry L. Ellsworth of Hartford, Connecticut, was appointed Superintendent of Patents. He was the last incumbent of that office. The Act of 1836 instituted the present modern examination system, drastically revised the organization and procedure, and created the office of Commissioner of Patents. Mr. Ellsworth became the first occupant of this position and it devolved upon him to initiate the policy under the new law and to found and develop an entirely new organization.

It is doubtful if a better selection for the position could have been made. He had successfully filled the office which the Act of 1836 abolished, and as Superintendent had substituted order for chaos in a department which, while frequently administered with brilliancy and considerable effectiveness, had never before his advent been conducted in an orderly, scientific, business-like manner. His previous training, interests and education particularly fitted him for the assumption of his new duties.

Henry L. Ellsworth was born in Windsor, Conn., November 10, 1791. His father was Oliver Ellsworth, a member of the Constitutional Convention and proposer of the title "Government of the United States" in substitution for "National Government" in the Constitution, the leader of the Federalist party in the national Senate, and a Chief Justice of the United States Supreme Court under Washington. Not only was his father identified with the early history of the country, but his twin brother, William Wolcott Ellsworth, was also prominent politically, having been Governor of Connecticut.

It was natural, then, for Henry L. Ellsworth to follow a public career. After graduating from Yale, studying law, practicing the profession, engaging in farming, and then pursuing a commercial occupation, he accepted an

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appointment from President Jackson as Chief Commissioner of Indian Tribes in 1832. He made several journeys during the occupancy of this office to the Rocky Mountains, being accompanied at one time by Washington Irving, who found then material for his "Tour on the Prairies."

Mr. Ellsworth was notified of his appointment as Commissioner of Patents on July 6, 1836, and immediately thereafter entered upon his new duties. The Office force consisted of *one* examiner and six other subordinate clerks and employees. But the business grew so rapidly that an additional examiner had to be taken on the next year. The business still growing, it was necessary in 1839 to enlarge the staff by the creation of the positions of two assistant examiners.

Before the new Commissioner had opportunity to adjust himself to the new conditions a fire destroyed all the records, models and papers of the Patent Office on December 14, 1836. Congress provided for the restoration of the records, and through the coöperation of the clerks of the United States courts and the activity of a committee appointed to provide models of the more important inventions, the process of restoration was completed, although not in Ellsworth's administration.

Fortunately, Congress had previously provided for the erection of a new Patent Office building. This structure was completed in 1840 and is the front or F street wing of the present building. In connection with the display of models, which entailed the occupation of much space in the building, Congress in the Act of 1836 made mention of a National Gallery. In 1842, Commissioner Ellsworth says in a report to Congress that "The building can also afford room for lectures by professors * * * I can confidently say that the agricultural class look forward * * * to the time when the sons of agriculturalists, after years of toil at the plough, can attend a course of lectures at the seat of Government and there * * * acquire such knowledge of chemistry and the arts as will enable them to analyze the different soils and apply agricultural chemistry to the greatest effect."

This concern for the "sons of agriculturalists" was no adventitious display. By law, the Commissioner of Pat-

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ents was also bound to report such agricultural statistics as he may collect. In conformity with this requirement, the Commissioner performed many of the duties now exercised by the Department of Agriculture, and the annual reports of those days gave much more space to this side of the activities of the Commissioner of Patents than to the titular aspect of his position.

In one year he examined the crops in ten States. He traveled extensively in pursuit of his duties and he inspected conditions with an expert eye. He was intimately acquainted with every angle of this field, and his annual reports are compendiums of useful knowledge, reviews of conditions, and advice in every branch of this large subject. The statistical presentation consisted of prices of staples in all the world's markets, estimates of crops, tables of customs duties and a mass of varied tabulated information. His own knowledge was extensive and he entered into a vast correspondence upon every subject relating to agriculture and allied activities. He reviewed all technical advances in these arts and was especially interested in the application of chemical processes to the improvement of the soil and for the production of larger and more varied crops. He was thus happily fitted to ornament this particular department of his duties, so incongruously associated by law with the legal and technical office of examining and issuing of patents.

Embodied in some of his annual reports were the individual reports of the two examiners, who, with the two assistants, comprised the examining corps at that time. One dated January 31, 1844, and signed by Examiner Charles M. Keller, was of particular merit and interest. The arts Keller examined comprised the following fields:

1. Metallurgy and Manufacture of Metals.
2. Manufacture of Fibrous and Textile Substances.
3. Steam and Gas Engines.
4. Navigation and Marine Implements.
5. Civil Engineering and Architecture.
6. Land Conveyance.
7. Milling and all Kinds of Mills.
8. Machines for Manufacturing and Working Lumber.
9. Firearms and Implements of War.
10. Miscellaneous.

That Examiner Keller's concern in his duties was not as attenuated as his arts were far-flung and diversified

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is at once demonstrated in the sixty solid printed pages of substantially presented and well-digested facts of his report. The technique of each art is well explained, its history interestingly told, and the progress and present condition thereof for the period of the report placed on the record. The remainder of all the arts is similarly covered in the report of Examiner Page. Together they present a startling commentary of the extent of their duties and versatility of their requirements. The pay of an examiner was then $1500, and although the purchasing power of the dollar was from three to four times what it is today, Commissioner Ellsworth was obliged to plead with one of these examiners not to resign his position in order to enter private practice to increase his income. In Ellsworth's own words—"Deep study and knowledge of different languages, a minute acquaintance with the arts and sciences, are all required to fit an individual for the office of examiner," making it appear that there is something inherent in the patent system in this anomalous association of large requirements and low rewards for this position.

During Ellsworth's administration the vulcanization of rubber and the electric telegraph were invented and patented. The latter made a profound impression upon him, and in two of his reports he gave a detailed and illustrated account of Morse's creation. He sensed its importance at once and made bold to say: "Among the most brilliant discoveries of the age, the electric magnetic telegraph demands a conspicuous place; destined, as it is, to change as well as to hasten transmission of intelligence and so essentially affect the welfare of society, and all that concerns its further developments will be hailed with joy.

"Imagination can scarcely conceive what is now accomplished by the electric fluid, when confined and tamed, as it were, to the purposes of life. Thought has found a competitor! Nor is it less gratifying that this invention is American. To a native citizen belongs the merit of the discovery and it is hoped that the country of his birth will reward him accordingly."

His reports show that he desired to be in touch with all the improvements in the mechanical arts, often traveling some distance to see a demonstration of some inven-

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tion or the operation of some machine. Whatever progress in the arts comes to his notice, he makes it public, as the information he obtained about "illuminating the streets of Paris by means of the Electric Spark." Being of a reflective turn of mind, he often became absorbed in the larger aspects of his interests, which led him into the channels of speculative thought and sometimes into an indulgence of prophesy. The juxtaposition of interests in things mechanical and agricultural asserted itself when he predicted the cultivation of the West by steam ploughs and machinery; an opinion which was used by contestants of his will in an attempt to prove the unsoundness of his mind.

That Ellsworth had fairly good control of his vision, however, and that he could demonstrate that his imagination was not wholly ungovernable, was indicated in the report of 1844 when, contemplating the astounding advances made in the mechanical arts during his lifetime and incumbency of office, and fearing a cessation of all endeavors in the field of invention, he apprehendingly said: "The advancement of the arts, from year to year, taxes our credulity and seems to presage the arrival of that period when human improvement must end." Which shows the futility of endeavoring to visualize the limits of man's advance into the fields of knowledge and accomplishment.

Since that time a new world has arisen. The age of steel and electricity saw its beginnings in the latter half of his century, and the internal combustion engine showed its possibilities still later. The telephone, the aeroplane, wireless communication, the X-ray machine, the motion-picture, the phonograph, are things that Ellsworth, with all his vision and interests, could no more picture than he could with certainty visualize the progress of science on the plant Mars. Whatever fears we may have of the consequence of the new social orders which follow invention, we need never apprehend the cessation of activity in the field of applied science.

While a resident of Washington, Ellsworth was a member of the executive committee of the "Colonization Society," organized to give asylum for recaptured Africans and to provide a home in Liberia for emancipated slaves. The aim of the society was not political, but

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purely philanthropical. In an address he made at a public meeting to further the purposes of this society, he showed that his interests were not exclusively material. It was an appeal to the noblest of sentiments and was delivered on such a lofty plane, with such elevation of tone, and with such charity and sympathy, as to mark him as a man of unusually fine character and deep love for humanity.

In 1845 he was succeeded as Commissioner by Edmund Burke and became Land Commissioner of the United States, settling at Lafayette, Indiana. He bought extensive tracts and became the largest landowner and farmer in the West. Ill health caused him to return to his native state in 1857, where he died on December 27, 1858.

The first of his line graced the position made notable by many of his successors. While some who have since occuped the office have been conspicuous for great brilliancy and achivement, none can dim the lustre of his reputation.

In the "Table of Important Inventions," printed on pages 445 to 447 of the May number of the JOURNAL OF THE PATENT OFFICE SOCIETY, the name of Carlton Ellis, the inventor at 22 of a basic discovery for a varnish remover, was inadvertently omitted from the list as originally published in the *Scientific American Supplement.*

It has also come to our attention that manganese steel was invented by Sir Robert A. Hadfield at the age of 22. While the table above noted was intended to be illustrative of certain observations, it was not at all intended to be comprehensive. But inasmuch as Hadfield's invention was such a remarkable discovery in the field of ferrous metallurgy, exciting the admiration of the whole technical world, and is so strikingly confirmatory of some of the conclusions derived from this table, we are glad to have the opportunity of making this interesting addition to the sum of knowledge on this question.

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APPEALS FROM THE COMMISSIONER TO THE COURT OF APPEALS IN INTERFERENCES ON QUESTIONS OTHER THAN THE ORDINARY QUESTIONS OF PRIORITY.

(Data Collected by Officials of the Patent Office.)

Prior to the creation of the Court of Appeals of the District of Columbia the statute provided only for appeals from a decision of the Commissioner affirming a decision of the examiners-in-chief, which affirmed a decision of the primary examiner rejecting the claims of an application (Secs. 4909, 4910, 4911). The act creating the Court of Appeals transferred to that court the appeals which were formerly heard by the Supreme Court of the District of Columbia sitting *in banc* and provided also that: "Any party aggrieved by a decision of the Commissioner of Patents in any interference case may appeal therefrom to said Court of Appeals."

The question soon arose whether the Court of Appeals would consider any question decided by the Commissioner of patents in an interference other than the ordinary question of priority, that is, the question who made the invention first, assuming both parties to have made it and that it was patentable.

In the case of Westinghouse v. Duncan, 66 O. G., 1009; 2 App. D. C. 131, the Court of Appeals dismissed an appeal from the decision of the Commissioner denying a motion to amend the issue. In the case of Schupphaus v. Stevens, 95 O. G., 1452; 17 App. D. C. 548, the question was raised that the invention was not disclosed in Stevens's application. The court refused to consider this question and in its decision said:

> Under all these circumstances, we do not consider that we are authorized, much less required, on this appeal to review this collateral decision. This court has time and again declared that the patentability of the claims of the contesting parties, in an interference case, is not involved; the question for determination is priority of invention.

The court uniformly refused to consider the question of the patentability of the issue. In the case of Johnson v. Mueser, 145 O. G., 764; 29 App. D. C., 61, it was argued that the question of patentability was jurisdictional and that the court must consider it. The court

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overruled this contention and a writ of error from this decision to the Supreme Court of the United States was dismissed and a petition for a writ of certiorari denied.

In the interference of Lowry v. Spoon the question arose in the Office whether any appeal should be allowed from a favorable decision by the primary examiner on a motion to dissolve wherein it had been contended that the Lowry device was inoperative. The Office held that under the rules no appeal lay and a petition for a writ of mandamus to compel an appeal was denied by the Court of Appeals of the District of Columbia (Allen v. U. S. *ex rel.* Lowry, 116 O. G., 2253; 26 App. D. C., 8). On appeal this decision was affirmed by the Supreme Court of the United States.

In that case the Court of Appeals considered at length the statutes and rules of the Patent Office relating to interferences and appeals therein.

The court in its discussion said:

> From the foregoing it is apparent that interferences were instituted for the purpose of deciding the question of priority of invention, and for no other purpose, and it logically follows that the reviews or appeals provided were to be from the decisions awarding priority by the officer who was authorized to decide the question of priority in the first instance.
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> We cannot emphasize too strongly that, in our opinion, the statutes relating to interferences only provide that they shall be instituted for the sole purpose of determining priority of invention, and that it logically follows that appeals in such proceedings, so far as the statutes go, only provide for appeals from the decision of priority.
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> * * * * * *
>
> The act of 1893 which created this court provides, that—
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> > Any party aggrieved by a decision of the Commissioner of Patents in any interference case may appeal therefrom to said court of appeals.
>
> We have construed that clause to refer only to final decisions by the Commissioner in interference cases and have refused to take jurisdiction and decide interlocutory questions sought to be brought before us on appeal in advance of an appeal taken in such cases to review a final decision awarding priority of invention. As we said in Westinghouse v. Duncan (C. D., 1894, 170; 66 O. G., 1009; 2 App. D. C., 131), in referring to appeals allowed by the statute:
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> > The terms of the statute should receive a reasonable interpretation and be so construed as to avoid multiplying litigation or producing unnecessary delay and expense to the parties concerned, and to prevent, as far as possible, embarrassment and hindrance to the proceedings in the Patent Office.
>
> We think this reasoning applies equally to appeals in the Patent Office in interlocutory proceedings in interferences.

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> * * * whatever right a party to an interference has to contest the right of his adversary to make the interfering claim, such right if denied is reviewable, if at all, upon the final decision of the question of priority, and such right of appeal as he has to have that question decided is to be considered on the hearing of the statutory appeals allowed from the decision of the question of priority by the examiner of interferences.

In the case of Pohle v. McKnight the examiner of interferences held that McKnight's application as filed contained no basis for the claims in issue, that he was not the inventor of the process in issue because portions of this process had been derived by McKnight from Pohle and inserted in McKnight's application by unwarranted amendments. The examiners-in-chief found that Pohle had failed to overcome the filing date of McKnight's application through failure to establish diligence. They made a formal award of priority to McKnight, but recommended that the interference be dissolved and Pohle's application sent to patent on the ground that McKnight's application as filed did not contain a proper basis for the invention in issue. The Commissioner in a decision rendered October 31, 1905 (119 O. G., 2519) reversed the decision of the examiners-in-chief and awarded priority to Pohle on the ground that McKnight's application as filed did not disclose the invention.

In discussing the question of the procedure to be followed the Commissioner, after referring to the decision in Allen v. U. S. *ex rel.* Lowry, 116 O. G., 2253; 26 App. D. C. 8, said:

> Whether the right of a party to make the claim in interference will be considered by the court on appeals from the final decisions upon priority in this Office seems to be an open question. Being of the opinion that the decision of priority of invention in the present case is so dependent upon McKnight's right to claim the invention as to necessitate consideration of the latter in the proper determination of the former, I conclude that my finding of insufficiency in McKnight's patent to support an award of priority in his favor will be best carried into effect by an award of priority of invention to his opponent.
>
> The decision of the examiners-in-chief awarding priority of invention to McKnight is reversed and priority of invention is awarded to Pohle.

In a decision rendered June 4, 1907 (McKnight v. Pohle, 130 O. G., 2069; 30 App. D. C., 92), the Court of Appeals affirmed the decision of the Commissioner, without commenting on the procedure.

In the case of Podlesak & Podlesak v. McInnerney, 120 O. G., 2127; 26 App. D. C., 399, the Court of Appeals,

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after referring to their prior holdings that they would not consider the question of the right to make the claims in interferences, said:

> * * * The question of the right of a party to make a claim goes to the very foundation of an interference, for if the party has not such right the interference falls. If it be incorrectly held that such party has a right to make the claim priority may be awarded to him and his adversary be deprived of a substantial right in that he is not given a claim where he necessarily is the prior inventor, his adversary never having made the invention. Manifestly that question should not be finally determined by the primary examiner who originally declared the interference. We therefore take jurisdiction to determine that question in this case as an ancillary qustion to be considered in awarding priority of invention. * * *

The decision of the Commissioner in that case was neither affirmed nor reversed, but the case was remanded to the Commissioner "for further consideration as to the identity of invention."

In the case of Brown v. Hodgkinson the examiner of interferences had recommended to the Commissioner under the provisions of Rule 126 that the interference be dissolved on the ground that the invention in issue was not disclosed in Hodgkinson's original application. Commissioner Allen, in a decision rendered a few months after the decision of the Podlesak case (123 O. G., 2973) held that if an interference was dissolved on the ground of no right to make the claims the decision could be appealed through the various tribunals of the Office, but could not be appealed to the Court of Appeals, whereas, if priority was rendered on this ground, the case would, in his opinion, be appealable to the court, citing as his reasons for believing that such an appeal would be entertained the decision in the Lowry case, *supra,* and the decision in the Podlesak case, *supra.* He therefore remanded the case to the examiner of interferences, with directions to enter a judgment of priority "according to his convictions in view of such evidence as is properly before him, including the applications and patents of both parties," but stating that the examiner of interferences would not consider "questions affecting Hodgkinson's right to his reissue patent which do not affect the determination of priority of invention" and that "consideration of these questions is reserved until the question of priority has been fully finally determined."

In the case of General Railway Signal Co. v. Thullen,

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142 O. G., 1116; 32 App. D. C., 575, the court took an appeal from a decision of the Commissioner dissolving the interference as to certain counts on the ground that the invention thereof was not disclosed in the application of Townsend, the assignor of the General Railway Signal Co. In this case, after stating that the Commissioner had affirmed the decision holding that Townsend could not make the claims, the sourt said: "The necessary result is an award of priority to Thullen."

In the case of *in re* Fullagar, 138 O. G., 259; 32 App. D. C., 222, Fullagar had appealed from a decision of the Commissioner dissolving the interference of Fullagar v. Emmet on the ground that Fullagar had no right to a reissue, in view of his delay and his lack of showing of inadvertence, accident or mistake. Emmet moved to docket the appeal as Fullagar v. Emmet and allow him to be recognized as a party and to dismiss the appeal. The court said:

> If the Commissioner had decided that Fullagar was not entitled to make the claim under his application, and had, in consequence, awarded priority to Emmet, Fullagar would have the right to appeal, bringing Emmet up for a final adjudication of the question of priority in this court. Instead of so deciding, the effect of his decision was to set aside the allowance of Fullagar's application as an entirety, and dissolve the interference.
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>
> But we cannot recognize the right of the Commissioner, if he so intended, to convert an interference case into an ordinary proceeding by one party upon an application for a patent, which he concludes to reject without an award of priority to the other party. The statute prescribes the procedure in the case of an application for a patent and for the reissue of a patent. If the application be rejected by the primary examiner, he must give notice of the same, with the grounds of his rejection, to the applicant, who has the right to answer the objections, or obviate them if possible, and to persist in his application. In that event he is entitled to a re-examination of his application. (R. S., Section 4903.) He has no right to appeal from the first rejection, but must await the re-examination and a second rejection thereafter. Of course, no interference can be declared in such a case until there has been an allowance.

In the case of Gold v. Gold v. Cosper the Commissioner had held that Cosper had no right to make the claims on the ground that the invention was not disclosed in Cosper's application as originally filed and that the amendment to the specification and drawing constituted new matter. Appeal was taken to the Court of Appeals from this decision, which appeal was dismissed on the

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ground that there had been no final award of priority (151 O. G., 194; 34 App. D. C., 194). In this case the court said:

> We have had occasion heretofore to call attention to the fact that the jurisdiction of this court to entertain appeals from the Commissioner of Patents is limited to two classes of decisions, namely, a final rejection of an application for a patent, and a final award of priority to one of the parties in an interference case. (*In re* Fullagar, C. D., 1909, 270; 138 O. G., 259; 32 App. D. C., 222.) It has been settled also that the question of the right of a party in an interference to make the claims of the issue is one that may be raised, decided, and brought up as an ancillary question necessarily involved in that of priority. (Podlesak v. McInnerney, C. D., 1906, 558; 120 O. G., 2127; 26 App. D. C., 399.) The order dissolving the interference on that ground is itself interlocutory and cannot be appealed from independently of a final decision putting an end to the litigation through an award of priority to the rival applicant. When that final award has been made the interlocutory order may be reviewed in an appeal therefrom, but not otherwise. (See Podlesak v. McInnerney, *supra; in re* Fullagar, C. D., 1909, 270; 138 O. G., 259; 32 App. D. C., 222.)

When this case was returned to the Patent Office the Commissioner set aside his order dissolving the interference and entered an award of priority to E. H. Gold in the two-party interference and an award in the three-party interference that Cosper was not the first inventor. A second appeal was taken to the Court of Appeals, which held that it now had jurisdiction of the case and reversed the decision of the Commissioner as to Cosper's right to make the claims (168 O. G., 787; 36 App. D. C. 302). In this case the court said:

> To determine what the decision is from which an appeal is presented, the court will look to its substance, its necessary legal effect and operation, rather than to its mere form. (Moore v. Heany, C. D., 1909, 488; 149 O. G., 831; 34 App. D. C., 31.)
>
> In the two-party case (No. 649) the necessary effect of the order declaring that Cosper was not the prior inventor, was to award priority to his opponent, Egbert H. Gold. In that case, if Cosper was entitled to make the claims he was entitled to an award of priority on the record. No question of fact was put in issue. Hence, it having been decided that he was not entitled to make the claims, the resulting decision that he was not the prior inventor was in substance and effect, a decision that Egbert H. Gold was the prior inventor. In that case the decision was necessarily final and appealable.
>
> The three-party case presents a case of greater difficulty. Three separate cases were involved in this one proceeding. There was a case between the applications of Cosper and Egbert H. Gold; another between Cosper and Edward E. Gold, and another between Egbert H. Gold and Edward E. Gold. These were separate cases and might have been so conducted; but as the same subject-matter was in controversy in each case,

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they were properly consolidated, in accordance with the practice of the Patent Office, for hearing and determination as one. (2 Rob. on Pats., sec. 612; Bell v. Gray, C. D., 1879, 42; 15 O. G., 776.)

MEMORANDUM.

If held that the claims can be made, and the question of priority is determinable on the record, it can be awarded at the same time. When the issue of priority is not determinable on the record, but on testimony, that has not been taken because of the first decision against the right to make the claims, the parties have the right to take that testimony before final hearing on that issue. (Lindmark v. de Ferranti, C. D. 1910, 355; 153 O. G., 1082; 34 App. D. C., 445.) The appeal from that decision, when made, will bring up for review, also, the decision of the ancillary question of the right to make the claims. It is unfortunate that when the award of priority rests solely, from first to last, on the preliminary decision against the right of a party to make the claims, the reversal of that decision may not, in the majority of instances, put an end to the litigation.

The difficulty of the situation arises out of the change of the practice resulting from a decision in Podlesak v. McInnerney, and cannot be avoided. It is one that constantly arises in proceedings at law and in equity as pointed out in Lindmark v. de Ferranti, supra.

When the decision is against the right of the party to make the claims and the award of priority to the opponent is on that ground alone, the whole case is brought up on appeal to the Commissioner. **If the decision is held erroneous, and the right to priority is not determinable on the record made by the preliminary statement of the other party, the case goes back for the taking of the necessary testimony on the issue of fact.** (Bold-face type mine.)

* * * * * *

We do not find the preliminary statement of Edward E. Gold in the record. If it is such, as seems to be conceded, that Cosper was not entitled to ask an award of priority against him on the record, the question of priority in fact remains to be determined between them on testimony taken for the purpose.

The court referred to the case of *in re* Fullagar, *supra*, and the case of Podlesak & Podlesak v. McInnerney, *supra*, and said:

As was held in the former appeal (C. D., 1910, 282; 151 O. G., 194; 34 App. D. C., 194), the decision of that question without a final award also of priority is interlocutory and, therefore, not appealable. The decision in these cases goes further and is substantially that Egbert H. Gold and Edward E. Gold, in their respective cases, are prior inventors to Cosper.

In the case of United States *ex rel.* Newcomb Motor Co. v. Moore, 133 O. G., 1680; 30 App. D. C., 464, which arose out of the interferences, Thomson v. Newcomb, and Lemp v. Newcomb, the court in a decision rendered after the Podlesak decision, *supra*, but prior to the decis-

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ions in Cosper v. Gold, *supra*, had held that since Thomson and Lemp had failed to appeal, *inter partes*, from the decision of the primary examiner dissolving the interferences on the ground that they had no right to make the claims, the decision on that question was final and *res adjudicata* and that the Commissioner was without authority to thereafter reinstate the interference. (Appeals were taken, *ex parte*, by Thomson and Lemp to the examiners-in-chief, who reversed the decision of the primary examiner as to their right to make the claims.)

There have been a number of decisions in which the Court of Appeals has considered the question of right to make the claims in connection with the ordinary questions of priority and also where this was the only question involved. (See Manly v. Williams, 168 O. G., 1034; 37 App. D. C., 194.)

The court has uniformly refused to consider (with the exception of the case of Skinner v. Carpenter, 166 O. G., 1281; 36 App. D. C., 178) the question of a bar to either or both of the parties.

In Skinner v. Carpenter the decision of the Commissioner awarding priority to Carpenter was reversed on the ground that Carpenter, who was a reissue applicant, was barred from obtaining a reissue by intervening rights, but in the subsequent case of Norling v. Hayes, 166 O. G., 1282; 37 App. D. C., 169, the court stated that in Skinner v. Carpenter it did not decide the question of priority.

In the latter case (Norling v. Hayes) the court again differentiated between an appeal from a decision of the Commissioner holding that one of the parties has no right to make the claims and a case of a statutory bar to a grant of a patent to one of the parties, saying:

> The distinction between the situation in the Podlesak case and that in the present case is apparent. In the former, if one of the parties had no right to make the claims of the issue, that is, if his application did not disclose the invention, and the application of his adversary did disclose it, the finding of that fact necessarily resulted in an award of priority. In the present case, a finding that a patent ought not to be issued to Hayes notwithstanding he is the prior inventor, in no way affects the sole question involved in the interference, namely, the question of priority; in other words, such a finding would not entitle Norling to an awardof priority. Had the Commissioner ruled that the structure of each applicant contained patentable features and that there was no interference in fact and we had sustained the latter ruling, could it be maintained that either

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party would have the right, as against the other, to urge the bar of public use? Manifestly not. We see no distinction in principle between the supposed case and the case before us. Again, if the Commissioner ultimately decides to grant the application of Hayes for the reissue of his patent, no appeal will lie to this court from that decision; and yet appellant asks us to decide this very question upon the ground that its determination is necessary to a decision of the question of priority of invention. It should be remembered that this is not an infringement suit, but a proceeding under a statute which provides for the determination of a single issue, that of priority of invention.

We conclude, therefore, that we are without jurisdiction in this proceeding to pass upon the question suggested.

The case of Mann v. Brown involved a patent to Brown and the application of Mann. Commissioner Ewing held thatMann's right to a patent was barred by certain prior patents. Appeal was taken, but was dismissed on the authority of the Fullagar case (Mann v. Brown, 214 O. G., 1026; 43 App. D. C., 457) and in a later case an appeal from a decision of the Commissioner dissolving the interference on the ground that the issue was not patentable over the prior art was dismissed (Griffin *et al.* v. Young *et al.*, 222 O. G., 1056; 44 App. D. C., 210).

The court has not always required a final award of priority as a prerequisite to an appeal. As noted above, the appeal was considered in the case of the General Railway Signal Co. v. Thullen (Townsend v. Thullen) from a decision dissolving the interference on the ground that Townsend had no right to make the claims and in the case of New Departure Mfg. Co. (assignee of Copeland) v. Robinson, 188 O. G., 1055; 39 App. D. C., 504, an appeal was considered, although Assistant Commissioner Billings had refused to enter an award of priority. In the latter case the interference was dissolved on the ground that the question of priority was *res adjudicata* in view of a prior decision in an interference between Robinson and Copeland involving the same application of Robinson but a different application of Copeland.

In connection with the above decisions should be noted the decision in Scott v. Moore, 180 O. G., 607; 39 App. D. C., 39, in which the court held that a writ of mandamus directing the Commissioner to cause the interference to be set down for hearing before the examiner of interferences was properly refused, and the decisions in the cases of Aufiero v. Ewing (223 O. G., 1718, and 223 O. G., 1717; 44 App. D. C., 328).

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In Scott v. Moore the Commissioner had held that the invention was not disclosed in an early application of Scott, which was relied upon to show priority of invention over Beckman, Scott's later application having been filed more than two years after the grant of Beckman's patent. In this case the court said:

> Grant that petitioners had no appeal to this court from the order as entered, because there was no award of priority (Cosper v. Gold, C. D., 1910, 282, 285; 151 O. G., 194, 195; 34 App. D. C., 194, 198); yet, as stated in the Commissioner's decision on September 26, 1911, had the petitioners requested that the former decision be extended to a formal award of priority, that order would have been entered as had been done in Cosper v. Gold, *supra*, after the dismissal of the appeal from the former decision holding that the appellant Cosper had no right to make the claims of the interference. Had the petitioners pursued that course an appeal could have been taken from the final award of priority bringing up for review all the grounds upon which the award was founded. (Cosper v. Gold, C. D., 1911, 387; 168 O. G., 787; 36 App. D. C., 302.)

In Aufiero v. Ewing an injunction was sought to compel the Commissioner to enter an award of priority in favor of Aufiero's opponent. The Commissioner had dissolved the interference on the ground that the issue was not patentable to Aufiero in view of the prior art, although it might be patentable to his opponent, Hutchinson, since certain of the patents referred to were not prior art to Hutchison. The lower court dismissed the bill and in its opinion, after referring to the cases of *in re* Fullagar, Cosper v. Gold, Podlesak v. McInnerney and U. S. *ex rel.* Scott v. Moore, said:

> Assuming that by mandatory injunction the Commissioner of Patents might be compelled to enter an order formally as one of priority on proof of facts like those in the cases of Cosper v. Gold for the reason that otherwise a party would be deprived of his right to appeal on the question of priority such a decree cannot be made here in view of the numerous decisions by the Court of Appeals not to consider questions of patentability until they are finally adjudicated in the Patent Office and that interference proceedings involve only the question of priority and not that of patentability. If the court had ever meant to determine otherwise it would have said in the Fullagar case what it said in Cosper v. Gold when that case was first before it; namely, that the appellant must—
>
> > go back to the Patent Office there to await a final decision of the Commissioner of the question of priority.

The Court of Appeals in affirming the decision (223 O. G., 1717) said:

> * * * In the present case, it was the deliberate judgment of the Commissioner that his ruling, that the issue in

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the interference was not patentable to the appellant because he had shown no invention over the disclosures of his prior patents, did not amount to an award of priority to Hutchison, the other party to the interference. Being of that view, the Commissioner very naturally declined to enter a decision awarding priority to Hutchison. The question was one calling for judgment and discretion, and the decision reached was a possible one, at least, and hence may not be controlled by mandamus. (U. S., ex rel. T. C. Steel Co. v. Ewing, 42 App. D. C., 179; United States, ex rel. Ness v. Fisher, 223 U. S., 683).

We do not wish to be understood as holding that the appellant was without redress, for, having requested the Commissioner to enter a final award of priority, he had done all he could, and had that been the necessary effect of the Commissioner's decision the court would have taken jurisdiction of the case on appeal, since—

> to determine what the decision is from which an appeal is prosecuted, the court will look to its substance, its necessary legal effect and operation, rather than to its mere form. (Cosper v. Gold, 36 App. D. C., 302; Moore v. Heany, 34 App. D. C., 31; in re Selden, 36 App. D. C., 428; Mann v. Brown, 43 App. D. C., 457, 460.)

In the case of Carlin v. Goldberg, 236 O. G., 1222, 45 App. D. C., 540, the interference had been dissolved on the ground that Carlin had no right to make the claims and the disclosure was not operative. After the decision of the Commissioner affirming the holding of the examiners-in-chief on this ground Carlin petitioned the Commissioner to change the decision to an award of priority. This was done and priority was awarded Goldberg. The Court of Appeals in its decision, after quoting from the order of the Commissioner which referred to the decision in Cosper v. Gold, 151 O. G., 194; 34 App. D. C., 194, and 168 O. G., 787; 36 App. D. C., 302, said:

> The difficulty with the present case is that no basis existed for an award of priority. In Cosper v. Gold, cited by the Commissioner, the appeal before the Commissioner was on the right of Cosper, the senior party of record, to make the claims in issue, but the interference had been tried and the case was in that condition where the issue of priority turned solely upon the right of Cosper to make the claims. Cosper was the senior party, both by the filing date and from the proofs; hence, if entitled to make the claims, his right to an award of priority was fully established. In other words the parties had had their day in court in the interference proceeding. But here the interference has never been tried. Indeed, the question of priority of invention has not been raised in any of the tribunals of the Patent Office or here, except in the petition on which the Commissioner changed his order.
>
> Let us consider for a moment where this appeal, if we were to take jurisdiction, would logically lead. If we should reverse the Commissioner on the question of priority, the only decision

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> from which an appeal will lie to this court in an interference proceeding, it would operate as a grant of priority to Carlin, the junior party, without giving Goldberg, the senior party, his day in court on that issue. The order appealed from was not made at Goldberg's instance, but at the instance of Carlin to enable him to prosecute this appeal, which, if successful, would effectually cut the senior party out of any hearing in so far as producing proofs to establish his right to priority.
>
> * * * * * *
>
> A motion to dissolve is interlocutory, and appeal will not lie to this court from an order thereon. The question of priority cannot be determined in proceedings purely upon the motion, for the elementary reason that, if the motion is denied, the soundness of the ruling is a question ancillary to the final judgment on priority, and may be considered on an appeal from the final order on priority (Podlesak v. McInnerney, C. D., 1906, 538; 120 O. G., 2127; 26 App. D. C., 399), while, if the motion be sustained, it ends the interference and no cause of action survives or exists upon which an order of priority can be based.

The appeal was dismissed.

In the case of Vincent v. Landsiedel (decided March 3, 1919) Landsiedel alleged no date of invention prior to Vincent's filing date. He moved to dissolve on the ground that Vincent could not make the claims. This motion was granted by the law examiner, but his decision was reversed as to all but one of the counts by the examiners-in-chief. No appeal having been taken by Vincent as to that count, priority as to the other counts was awarded to Vincent by the examiner of interferences and his decision was affirmed by the examiners-in-chief. On appeal to the Commissioner it was held that Vincent could not make these claims. The decision of the Commissioner concluded as follows:

> None of these claims have any logical support in Vincent's construction. The decision of the examiners-in-chief is reversed and the interference is dissolved.

From this decision Landsiedel appealed. Motion was made by Vincent to dismiss the appeal, but this motion was denied by the Court of Appeals. It was held that Vincent could make the claims. The decision of the Commissioner was reversed and priority awarded to Vincent.

In considering the motion to dismiss the court said:

> If in addition to reversing the examiners-in-chief and dissolving the interference he (the Commissioner) had adjudged priority to Landsiedel, it would be clear that his decision would be appealable; but that in effect, abeit not in form, is what he did. In the language of the Fullagar case, there was for him "nothing else to do."

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A LETTER TO THE EDITOR.

To the Editor:

That portion of Examiner Tullar's article relating to Rule 29, in the December issue of the JOURNAL, was very interesting. However, the statement in the last three lines of page 195 might well have been amplified or more fully developed in view of the great importance of divisional cases.

Mr. Tullar, in this one sentence, lumps all divisional cases together without a distinction which is not only important to United States applicants, and perhaps little known, but which under certain conditions is vital to foreign applicants filing in this country under the Convention.

To illustrate, if an English applicant files in his home country on January 1, 1919, he has until January 1, 1920, in which to file here, under the third condition stated by Mr. Tullar on page 192. Now suppose that the English applicant takes the full year benefit, and division is required in his United States case, and assume that he elects to file his divisional application in this country after his parent United States case has gone to issue, then, and in that event, his United States divisional case will be barred from maturing into a valid patent, if the parent patent disclosed the subject-matter claimed in the divisional case. It is well settled that a divisional case, filed after the parent case goes to issue, takes no benefit from the filing date of the parent case. In other wards, this kind of divisional case does not "relate back to the parent case." In *in re* Spitteler and Krische, 134 O. G., 1301; 31 App. D. C., 271, the court states:

> An application filed within one year after the grant of a patent disclosing the subject-matter of such application is not a continuation of the application on which such patent was granted and is not entitled to the benefit of the date of such prior application. Although the claims of the second application were made in the prior application, on which the patent was granted, and could have been divided out therefrom, and the date of the prior application could have been thus secured, when the patent was granted the application was merged in the patent, the proceeding was closed, and there was nothing to be continued.
>
> The rule which permits a divisional application to relate back to the filing date of the original, which also discloses its subject-matter, as long as it remains open in the Patent Office is a very liberal one that sometimes works hardships upon inter-

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mediate inventors, and it ought not to be extended to cases not clearly within it.

Thus it would seem clair that if a foreign applicant takes his full year, or, in any event, if he wishes to have his United States divisional case relate back to his parent case, *he must file his divisional case before the parent case goes to issue,* provided, of course, that his divisional case is not filed within one year from the date of filing of the earliest foreign case, on the same subject-matter. If the foreign applicant did not take his full year, and even if his divisional case was filed after the issuance of his parent case, but within the Convention period, he would still be within his Convention rights even though his divisional case here did not have the benefit of, or "relate back," to the parent case from which it was carved out. It is believed this is a matter which should be called to the attention of all examiners, as I have frequently seen Convention divisional cases here go to issue when they were filed after the parent case issued, and beyond the Convention period, in which event such divisional case was clearly barred.

It might be argued that having once filed the complete United States case within the Convention period, the applicant definitely perfected his rights. This is true, but unfortunately in patent matters as well as in other things, a man may later lose what he formerly acquired. After the case is once filed here, then it is subject to our own internal law and practice, as well as to the Convention. Therefore, taking this decision as it stands, in connection with the clear wording of the statutes, it is the business of a foreign applicant to file all of his United States divisional applications within the Convention period. This is especially so in this country, because a divisional patent *does not expire* on the date of expiration of the patent issuing on the *parent case,* from which a divisional was carved out. In foreign countries, the duration of a patent runs from the filing date of its application, and a divisional patent expires on the date of expiration of the parent patent from which the divisional case was carved out. Therefore the monopoly is never extended by divisional cases as in this country. Mr. Tullar does not cite any court decision supporting the decision of the Board of Examiners-in-Chief, decided

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February 13, 1918, Vol. 37, page 113, and I do not believe this point has been decided by any court with the statute as it now stands. Surely, a signatory to a convention or treaty cannot, by the operation of its internal laws, extend the benefits of the treaty beyond the limits specified therein.

Therefore, in any event, whether the divisional case is filed during the pendency of its parent case or not, it is my opinion that all Convention divisional cases *in this country* must absolutely be filed within one year from the date of filing *of the earliest foreign case,* by very reason of the fact that otherwise the period of monopoly is extended beyond that which the Convention contemplates, as the "similar privilege rule" is binding.

Thus it should be made clear that there are two kinds of divisional cases, namely, the one which is filed by mere sufferance of the two-year rule, after the parent case goes to issue, and which is not a continuing case at all, and the one which is filed during pendency of the parent case and which is a continuing-divisional case. This point might be made very interesting in some applications in interference where at least one of the applications is a Convention divisional case.

It would be very informative to have Mr. Tullar's comments on this phase of divisional cases.

The writer notes the four conditions defined on page 192, but in condition 2 there seems to be an error, or rather a want of amplification, since it is clearly not necessary that the foreign and domestic applications must be filed "by the same person." It must at least be filed by the same person here for whose benefit or with whose knowledge the corresponding foreign application was filed. Of course, Mr. Tullar knows this fact as he clearly deals with it in the first paragraph of page 193, but, nevertheless, condition 2, in both places on page 192, might well be amplified as indicated, in deference to complete accuracy.

Condition 3 is absolutely clear. The marvel is that in our practice nothing is required, in the oath given in the Rules of Practice, other than mere negative reference to what has been filed abroad, after the words "except as follows." A foreigner filing here is not required to *affirmatively aver that the list of filing dates in his oath*

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is complete. He could leave out the earliest date and to all appearances, if that earlier filing were in Hungary, or in other countries where applications are not printed when issued, he could show on the face of the oath that his United States case was filed within one year of the earliest date given in his United States oath. As a matter of fact, for foreigner's use, our United States oath should be supplemented in considerable amplification so that the foreigner filing here would be required *affirmatively to aver that he had given all, including the earliest date of filing abroad,* and further, he should swear that those foreign applications not filed in his own name were filed with *his knowledge and consent,* or *for his benefit.* As a matter of fact, a foreign applicant filing here should additionally be required to prove to the examiner, either by supplying a certified copy of his foreign patent, or a sworn translated certified copy of his foreign application, that he actually did file on the date claimed. Such verified proof is rigidly insisted upon in interference proceedings and also under Rule 75, but this proof is just as necessary when the application is filed and should be required.

It should be particularly necessary for the foreign applicant filing here to comply with condition 4, by actually showing what he filed abroad. Many cases slip through without much regard for this important condition.

When our Patent Office officials so clearly understand every phase of the law governing the matter, it is more singular that the practice should not keep pace but should, on the contrary, lag behind in loose indifference.

It is because Mr. Tuller has made a very informative and complete compilation of the law, relating to Rule 29, that I have been prompted to call attention to slight defects in what is an otherwise effective and laudable effort. Respectfully,

C. H. CRAWFORD.

Spokane, Wash., May 23, 1919.

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MR. TULLAR'S REPLY.

June 3, 1919.

MR. CARL H. CRAWFORD, 322 Peyton Building, Spokane, Washington.

Dear Sir: I have your letter of the 23d ultimo enclosing a copy of the article you have forwarded to the editor of the JOURNAL relative to Rule 29. I do not know what the editors of the JOURNAL intend to do with this matter, as they have not consulted me.

Your suggestion that my remarks in regard to divisional applications should be amplified has been considered, and if I am called upon to rewrite the paper for any purpose I shall probably follow your suggestion. There is no real inconsistency between what you say and the statement on page 192 of the JOURNAL, since I used the term divisional application in the only sense in which the use is permitted by the Patent Office. I had Spitteler and Krische, 134 O. G., 1301, in mind when I wrote this paragraph. A case which is filed after the so-called parent case has been patented is not a divisional case and applicants are not permitted to term such cases divisional cases.

In the sentence beginning in the fourth from the last line of page 2 of your article you state that you have frequently seen Convention divisional cases go to issue when they were filed after the parent case issued and beyond the Convention period. This is suprising, if true, and I called the matter to the attention of First Assistant Commissioner Whitehead, who states that he believes you must be in error as to this matter and would be pleased to have you refer to one such case if you have it in mind.

I note your belief, stated at the top of page 4 of your article, that "all Convention divisional cases *in this country* must absolutely be filed within one year from the date of filing *of the earliest foreign case.*" I do not believe you are justified in holding this opinion, as there is no authority upon the point and such a construction of the statute would not promote the progress of science and the useful arts to the full extent, since it would bar many patents not clearly barred by the terms of the statute. The matter of the necessity for division is fre-

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quently uncertain and the twelve months' period of priority does not allow sufficient time for an applicant to file his case and receive a requirement for division from the Office and respond to the same by either filing a divisional case or settling the propriety of the requirement for division by appeal and then filing the divisional case if the requirement is sustained. The decision of the Board of Examiners-in-Chief referred to on page 187 of the JOURNAL for December, 1918, is the only authority I have been able to find bearing upon the proposition that the purpose of amended Section 4887 was to terminate the monopoly in this country as nearly as possible at the same time the monopoly terminated abroad. The decision is not susceptible of extension to cover the proposition advanced in your article. As I recollect the facts in the case, the applicant had filed an application and secured a patent therefor in a foreign country, which patent was held under the ban of secrecy by the authorities of that country for war reasons. The applicant was prevented by the authorities from communicating the invention to the United States Patent Office until this ban of secrecy was lifted, and as soon as it was lifted he filed the application in this country within twelve months of the time the ban was lifted. The applicant contended that this procedure was a sufficient compliance with the requirements of Section 4887, but the Board held otherwise.

I have noted your remarks on page 5 of your article in regard to the alleged inadequacy of the oath required by the rules in the case of foreign applicants. I am unable to follow your reasoning. If the applicant should "leave out the earliest date * * * if that earlier filing were in Hungary, or any other countries where applications are not printed when issued" and make the oath required by the Rules, he would be clearly committing perjury. The cases that arise under the practice of Steel *et al.* v. Myers, 1914 C. D., 74, referred to on page 195 of the JOURNAL for December, 1918, are cases in which the applicant executes the oath for his United States application and then files his foreign application before there has been sufficient time for the application papers, including the oath, to reach the United States Patent Office.

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Near the bottom of page 5 of your article you state that the proof of the filing of a foreign application is just as necessary when the application is filed as it is in the case of interference proceedings or cases arising under Rule 75. Your reasons for this statement are not given and your attention is called to the fact that Article 4 of the International Convention, as revised at Washington, June 2, 1911, reads, in part, as follows:

> (d) Whoever shall wish to avail himself of the priority of the anterior filing, shall be required to make a declaration showing the date and the country of this filing. Each country shall determine at what moment, at the latest, this declaration must be executed.

My personal opinion is that it would be desirable to have this proof made and placed in the file of every application entitled to a benefit under Section 4887. It seems to me that it would be desirable in many cases. For example, if an applicant desired to swear back of a reference under Rule 75 and the referencewas a patent granted on an application filed under the Convention, its effective filing date would be that of the filing of the foreign application and the affidavit under Rule 75 should therefore antedate the foreign filing date rather than merely the domestic filing date. Where, however, the proof of the foreign application is not required to be filed by the applicant there is no machinery for securing such proof by any other party, and it therefore is apparently improper to require affidavits under Rule 75 to antedate anything more than the domestic filing date. To require that proof of the foreign application be filed in each case would necessitate an amendment of Section 4887, since Article 4 of the Convention has been held not to be self-executing.

If my letter is not a full answer to the questions you have in mind, I should be pleased to hear from you further. I have been exceedingly busy ever since the receipt of your letter, and am dictating this hurriedly and without notes.

Very truly yours,

C. E. TULLAR.

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AN INQUIRY.

May 9, 1919.

To the Editor:

One of our clients understands that the War Industries Board, or some other department of the United States Government, ruled that no damages would accrue for infringement of any United States patent in connection with production of war material on Government orders. He states that his understanding is that soon after our entrance into the war it was found that large sums were being added to contract prices because of royalties and that, therefore, this ruling as a war measure.

We never heard of it before and are desirous of knowing the facts. Can you give us any information?

Thanking you in advance, we are,

Yours very truly,

HOSEA, KNIGHT & PHARES.

LIEUTENANT COLONEL DELAFIELD'S REPLY.

May 27, 1919.

MESSRS. HOSEA, KNIGHT & PHARES, 501-2 Gwynne Building, Cincinnati, Ohio.

Gentlemen: Relative to your request in letter dated May 9, 1919, relative to a supposed ruling of the War Industries Board to the effect that no damages would accrue for infringement of any United States patent in connection with the production of war material on Government orders, I submit the following:

1. Referring to a recent conversation * * * relative to the request contained in a letter from Messrs. Hosea, Knight & Phares, of Cincinnati, Ohio, to the JOURNAL OF THE PATENT OFFICE SOCIETY, Washington, D. C., dated May 9th, 1919, the following is submitted:

> Because of the fact that the Act of June 25, 1910, as amended by the Act of July 1, 1918, provides that a patentee shall have a remedy against the Government for unauthorized use of his patent, it is clear that no Board or Commission could make a ruling depriving such patentee of his rights.
>
> The amendment to this Act contained in the Act of July 1, 1918, and especially that part contained in the first proviso, from which it would seem that the Court of Claims may not entertain suits for past infringements, is probably responsible for the idea expressed in the letter above referred to.

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2. There has been no ruling of any Board or Commission which has attempted to deny the patentee his right to claim damages for infringement of his patent.

By direction of the Chief of Ordnance.

Respectfully,

JOHN ROSS DELAFIELD,
Lt. Col., Ord. Dept., U. S. A.

By S. H. GRAVES, Lieut., Ord. Dept., U. S. A., Chief, Patents Branch, Advisory Sec., Adm. Div.

COMPARATIVE UTILITY AS A REQUISITE OF PATENTABILITY.

BY C. O. MARSHALL, *Second Assistant Examiner.*

(Delivered Before the Examining Corps.)

Your committee originally intended to stage a debate at this time, the question being based upon a supposititous case, which I will state:

Suppose the type of propeller now used on ocean liners to be known and the paddle-wheel to be unknown. If now an application were filed for a patent for a paddle-wheel to be used on ocean-going vessels, no suggestion being made by the applicant that the paddle-wheel might be useful on vessels of other kinds, it was to be contended by the affirmative that a patent should be refused on the ground that the paddle-wheel was not sufficiently useful, as compared with the propeller.

The man who was to have upheld the affirmative has, however, gone to take part in a more important argument and your committee has decided to have the subject impartially discussed in a single paper.

The solution of the question which is before us will undoubtedly be simplified if we first lay out the parts of the proposition in regard to which there is and can be no controversy. We must all agree, I believe, that the purpose of the patent system is "to promote the progress of science and the useful arts."

In order to clearly understand the bearing of the question of comparative utility upon the furtherance of this purpose we must keep in mind—

First. The nature of the progress of the useful arts.

Second. The nature of the patent system.

Third. The mode of operation of the patent system.

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Nature of the Progress of the Useful Arts.

It is incontrovertible that the progress of the useful arts is an evolutionary process, characterized, like all evolutionary processes, by a great ourpouring of specimens, only a few of which survive.

Nature of the Patent System.

The patent system is a part of the great system of private property, and as the law of private property in chattels operates to increase the total wealth of the race by establishing private rights, so the patent law by securing certain private rights in new items of knowledge operates to increase the sum of human knowledge. That is to say, it is education. This primary characteristic was recognized by the courts long before the day of published specifications, even long before the enactment of any patent statute.

Operation of the Patent System.

The granting of patents promotes progress by—

First. Stimulating invention by holding out to the inventor the possibility of reward;

Second. Establishing a reservoir of information, and

Third. Encouraging the development of known inventions.

The protection thrown about the inventor is not to be regarded solely as a reward for past efforts. It is a fence which keeps the cattle out of the field until the crop has matured. By compelling others to keep hands off, it enables the inventor, or his assignee, to devote himself to improvement with the assurance that every increase in the utility of the device to the public will be followed by an increase in his own reward. It not only encourages inventors to invent, but it encourages manufacturers to manufacture and develop. (See Robinson, pages 51-52.)

If the device is not so good as others on the market, the manufacturer is bound to try to better it. If it approaches the old device in utility, those who are committed to the old device must improve that.

The Requisites of Patentability.

Before any statutory enactment, novelty, utility and invention were requisite to the validity of a patent. Nov-

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elty, utility and invention were requisite under our statutes before provision was made for examination in the Patent Office. The existence of these elements is now primarily determined in the Office, but ultimately determined by the courts. If the applicant has procured a patent on an instrument which is not novel, the patent is void because he has not added anything to the fund of useful knowledge. If the device is not the result of invention, the patent is void because he has added nothing not already potentially in the fund. In either case, he has given no *quid pro quo*. The monopoly of an old device, or one not the result of invention, might and often would be of great value, but it would be one for which the public had received nothing. The grant would be taking something already in the actual or potential possession of the public and giving it to a private party.

Utility is requisite for quite different reasons. If the thing is devoid of utility there is nothing taken from the public and the monopoly is of no value to the patentee. The patent grant in such a case might in the hands of a dishonest holder become an aid to fraud, but this might also happen in the case of a valid grant.

One sort of non-useful machine frequently met with in examining applications is that in which the inventor, starting with a small amount of power, attempts to build it up by passing it through a maze of transmitting elements. This type of machine was discussed in *ex parte* Ackert (C. D., 1872, 47), in which the report of the examiner on a case was adopted *in toto* by the Commissioner in his decision. The subject of the application was an operating mechanism for a churn designed to "gain power" and "get velocity." The examiner described it, in part, as follows:

"Having secured his required velocity by means of a lever with a very short-toothed sector power arm, he next proposes to regain his lost power by a reverse process, namely, a lever with a long power arm and short-toothed sector velocity arm meshing into the former sector arm, which leaves him where he started (minus friction). It is then gravely proposed to regain the loss by friction by still further extension of the power arm."

The machine was in the perpetual motion class and therefore clearly inoperative as and for the purpose described.

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Discussing the requirement that the invention be "sufficiently useful and important," the examiner said, "This clause was expressly designed to protect the prestige of the Office against frivolous claims, which prestige has a distinct and immense money value to the public and which that public largely avails itself of in its confidence in dealing in patented property in this country prior to any litigation."

The determination of utility is therefore highly important. Utility itself is of transcendent importance. It is the very basis of the useful arts. Many things that have long since lost their novelty and the discovery of which would not call for what we now consider invention, still occupy prominent places in industry—because of their utility. No matter how great the inventive effort required to bring a device from the unknown, no matter how remote the region from which it is brought, it cannot become a part of the industrial arts unless it be useful. Of the three requisites that must abide in every patentable device—novelty, invention and utility—the greatest of these is utility.

It behooves us, then, to know what this property is and by what standards it is to be measured.

The Law as to Utility.

How, then, stands the law? The case of Lowell v. Lewis (Fed. Case 8568) is the earliest American case on the subject that I have found. It was decided in the May term of the Circuit Court of the District of Massachusetts in 1817 and was a suit for infringement of a patent for a pump.

The object of the invention was to make the area of the foot-valve opening more nearly equal to the area of the plunger and thereby to increase the capacity of the pump.

The patentee made the chamber and plunger square and pivoted triangular valve leaves to the sides of the square chamber so that the leaves could turn up against the sides of the chamber and leave it practically unobstructed on the upward stroke.

This pump, if made small enough for one man to operate, was very inefficient, probably because of leakage around the square plunger. The defendant made

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his plunger round and otherwise improved the mechanism so that it was applicable to pumps of ordinary size.

The defendant, one of whose attorneys was Daniel Webster, contended "that it is necessary for the plaintiff to prove that his invention is of general utility; so that in fact for the ordinary purposes of life it must supersede the pumps in common use. In short, that it must be for the public a better pump than the common pump."

Judge Story said:

> I do not so understand the law. * * * All that the law requires is that the invention should not be frivolous or injurious to the well-being, good policy or sound morals of society. The word useful is therefore incorporated into the act in contradistinction to mischievous or immoral. For instance, a new invention to poison people or to promote debauchery or to facilitate private assassination is not a patentable invention. But if the invention steers wide of these objections, whether it be more or less useful, is a circumstance, very material to the interests of the patentee, but of no importance to the public.

In Bedford v. Hunt (Fed. Case 1217), October term of the same year, Judge Story again stated the law in this language:

> The law, however, does not look to the degree of utility. It simply requires that it shall be capable of use and that the use is such that sound morals or policy do not discountenance or prohibit.

The law as to comparative utility still stands as it was when these cases were decided. They have been quoted in scores of decisions from that day to this and the conclusions of the text writers are in strict accord.

Curtis states (Par. 106):

> What is not injurious or mischievous to society may be of some beneficial use; and when this is the case, that is to say when the invention is not absolutely frivolous or insignificant, the law takes no notice of the degree of its utility whether it be larger or smaller as compared with other things of the same class.

Walker states (Par. 79):

> If, however, a device performs a good function, though but imperfectly, the utility of the device is not negatived by the fact that * * * some prior invention performed the function quite as well, or performed it with superior excellence. * * * Inded, patents are never held to be void for want of utility merely because the things covered by them perform their functions but poorly. In such cases no harm results to the public from the exclusive right because few will use the invention.

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And Robinson's statement is (Par. 342) under the caption, "Utility Actual, Not Comparative":

> The existence of utility in an invention is not determined by comparing it with other arts and instruments. It is not essential to its patentability that an invention should supersede or be superior to others theretofore employed for the same purpose, nor it is inconsistent with its usefulness that it should in its turn have been displaced by subsequent inventions. It must be useful in itself, in some degree, at the date of its bestowal on the public. This being true it is sufficient consideration for the grant of an exclusive right; although the value of that right to the inventor may depend almost entirely upon the relative superiority of his invention when compared to others.

In *ex parte* Hall and Hall (C. D., 1872, 196), Mr. Commissioner Leggett made this statement:

> I cannot entirely disregard Section 31 of the Patent Act, which requires that, on examination, the alleged new invention shall appear "sufficiently useful and important"—not regarding it absolutely, of course, but with reference to the state of the art to which it pertains.

The subject-matter of the application was a sprinkler pipe made of lead with smooth perforations. Perforated metal pipes were old and the Commissioner said that smooth holes had been known "since the day of Tubal Cain," so that the statement as to relative utility was apparently a mere dictum. And after having been here a year longer he seems to have changed his view, for in *ex parte* Smith (C. D. 1873, 139) he said:

> The courts have construed the word "useful" so as to include any thing that is not hurtful and is adapted to the end sought. In this case there is entire want of such adaptation. I admit that there is rarely ground for invoking this clause of the statute to defeat an application and it should always be resorted to with great caution. The mere fact that the device is small and apparently trifling is not proper ground for rejection.

The applicant in that case proposed to pump water by hand from below a water wheel to operate the water wheel and drive the heavy machinery of a mill. It was one of the not uncommon cases in which the inventor labors under the delusion "that nature can be circumvented" and power gained by sufficiently complicating the parts.

There appears to be no authority whatever for the proposition that a patent for a useful device should be refused on the ground that the prior art contained devices of the same character and of superior utility. In the comparatively recent case of Besser v. Merrilot

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Culvert Core Co., 243 F. R., 611, Cir. Ct. A. 8th Cir., this statement is found:

> The term "useful," as contained in the patent law, when applied to a machine, means that the machine will accomplish its purpose practically when applied to industry. It is to be given a practical and not a speculative meaning. It means that the machine will work and accomplish the purposes set forth in the specifications. Even if the machine can be made to accomplish the purposes specified, it is not useful within the meaning of the patent law if from its inherent nature it will accomplish the purpose only to such a restricted extent as to make its use in industry prohibitive.

It is clear that the court considered the culvert core as actually worthless. The statement of the law goes further than other cases, but the opinion nowhere intimates that a patent should be held invalid on the ground of comparative inutility. On the contrary, the court cites as one of its authorities, Bliss v. Brooklin, Fed. Case 1546, in which the court said:

> The law upon the subject of utility is not in doubt. No particular amount of utility is required to render an invention patentable, but there must be some. When an invention is shown to be worthless the patent must fail. Such appears to be the case in the present instance.

The device in that case was inoperative. It was a hose coupling that literally would not hold water.

Another interesting case in which the patent was held not for a useful invention is that of Twentieth Century Motor Car and Supply Co. v. Holcomb Co., 220 F. R., 669, C. C. A., 2nd Cir., Jan. 12, 1915. The patent was for a rain-vision wind shield of the type in which the upper glass is swung forwardly to leave an opening through which the driver may view the road.

I quote from the opinion:

> * * * when the upper glass is swung into position away from the lower glass, the horizontal distance between them cannot exceed three inches. What the perpendicular distance, through which the chauffeur must look in order to see the road, would be, is not stated, but manifestly it must be much less than three inches. To rely upon such a narrow opening through which to view the road ahead seems to us a highly dangerous expedient. When it is remembered that cars moving at the rate of twenty-five miles an hour, which is not generally considered excessive, are approaching each other at the rate of fifty miles an hour it seems plain that if the drivers relied upon these narrow perpendicular openings they would be in the jaws of collision before they knew of each other's approach.

There may be some doubt as to whether or not this finding of fact was right. The size of the opening that

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is necessary for adequate vision depends, of course, upon its distance from the eye of the driver. We know, for illustration, that a ball game may be viewed through a knot-hole in the fence. But whatever we may think of the finding of fact, the case does not hold the patent void because the shield was less useful than other similar shields, but because the court believed that it was not useful at all.

While it is established beyond doubt that an art or instrument need not be more efficient than prior devices, to render it patentable, there are cases in which resort is properly had to a comparison of utility in order to determine whether or not a thing is patentable. Relative utility is considered in these cases, however, *not* to determine whether or not the thing is useful, but in order to determine whether or not *novelty* is present. I quote from Robinson (Par. 344):

> Upon the question of novelty, where doubt arises concerning the identity of two inventions, and whether the apparent diversities between them are formal or substantial, the superior utility of one may be sufficient to remove the doubt. For though the apparent difference be small, the difference in the usefulness of their results may be great enough to demonstrate that, notwithstanding all external similarities, such variations must exist between their modes of operation that the ideas which they embody cannot be the same.

This is only a phase of the well known rule that *novelty* is determined by comparison with the prior art. Things are compared by comparing their properties, and utility, as we have seen, is the most important property of every instrument that falls within the field of the useful arts.

Summary of Established Premises.

In a word, the patent system purposes to promote the progress of the useful arts by stimulatng invention, encouraging the mechanical and commercial development of known inventions and creating a fund of available information relating thereto.

The elements of patentability are invention, novelty and utility.

"The law does not look to the degree of utility. It simply requires that it (the invention) shall be capable of use and that the use be such that sound morals or policy do not prohibit."—Bedford v. Hunt, *supra.*

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What the Proposition of Refusal for Comparative Inutility Involves.

Recurring now to our suppositious case and to the proposition that a patent for a paddle-wheel should be refused because the paddle-wheel, though new, is less efficient than the old propeller, it is apparent at once that this procedure would involve a change that is fundamental. It would substitute for the evolutionary process of natural selection the Spartan practice of infant exposure.

Practicability.

The change, even if it were desirable, is impracticable from an administrative standpoint. The inventor himself can seldom judge as to the comparative utility of several forms of the same broad invention. In class 21-69 (vehicle wheels) there is a patent to the great Edison which shows five modifications, none of which, so far as I know, has gone into practical use. You will all recall similar examples in your own classes. If the inventor cannot judge as to comparative utility in such cases, how can the examiner be expected to do so? We all know that we are daily acting on cases without having seen either a single device of the prior art or the device of the application in actual operation.

A very interesting opinion bearing on this question is found in *ex parte* Cheesebrough (C. D., 1869, 18), decided by Commissioner Fisher. The object of the invention was to prevent "canals and other water courses from being closed by ice." The means used was a series of boilers placed at stated intervals and connected by pipe which lay along the bottom of the canal and through which superheated steam was passed under the water. The application had been rejected on the ground that the device was not sufficiently useful, the examiner being of the opinion that the thing would be too expensive. The Commissioner said:

> Utility, in the eye of the patent law, refers rather to a utility of purpose than a utility of means. If the end which the inventor proposes to accomplish be useless, mischievous, frivolous, or immoral, he can obtain no patent, although the means which he proposes may be ingenious and for his purpose, of great utility (as a burglar's tool). On the other hand, if the purpose be a good or useful one the utility of the means need not be carefully scanned. If the means are inferior to the old way of doing the same thing, or inferior to other new ways, the invention sinks into obscurity and is soon forgotten. **The best test of utility is use**; and in the busy competition of trade

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this test is soon applied, and the judgment of the inventor is affirmed or reversed by an inexorable tribunal.

This Office may readily apply the first test. It may determine whether the purpose of the invention is a proper one. It has no means of applying the second. It cannot enforce the trial of the invention on a scale sufficient to develop its usefulness, nor upon any scale. It is furnished with a drawing and a small model. From these it would be, in most cases, trifling with the rights of inventors to attempt to pronounce, *ex cathedra*, upon the value of their inventions. It can only see that the purpose proposed, if accomplished, would be useful, or that the plan does not show the absence of some part obviously essential. Beyond this it can only oppose the opinion of man to man—an opinion by which if all our great inventions had been tried when first presented to the Office or to the public, the great majority of them would have been strangled at birth by the unfriendly hand of adverse critcism. Tried by the tests which I think ought fairly to be applied to it, I think this invention proposes to accomplish a purpose which is eminently useful. The feasibility of it, in point of expense, I leave to those who may hereafter contract with the applicant.

Indeed, the brightest minds are often unable to judge even as to the absolute utility of a new device. This is shown by patent No. 6469 to Abraham Lincoln.

Desirability from a Theoretical Standpoint.

It is, however, reasonably arguable that whatever the difficulties the change may involve, if it is desirable from a theoretical standpoint the right men and machinery can somehow be provided to carry it out and that it will at least furnish an ideal toward which we may work.

No weightier authorities as to the desirability of the change can be found than the opinions of the courts as to what the law on the subject is, because those opinions were essentially, at least in the beginning before precedents had been made, statements of what the judges thought the law ought to be. The question seems to be substantially disposed of in the reasoning of the decisions that were cited and quoted in our determination of what the law is. We need not therefore burden ourselves with further authorities, but may complete our disposition of the question after briefly examining it as though it were an original proposition.

Devices of the prior art are often highly developed. When new inventions come into the Office they are often crude and wobbly. Many of them, however, which are apparently weaklings, fit only for exposure to the harsh rigors of the examiner's judgment as to their comparative utility, but which are now spared this treatment, may, and often do, grow into giants of usefulness.

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In 1879, when Selden filed the application for his now famous motor-vehicle patent, the Brayton internal combustion engine was comparatively highly developed. The Otto type of engine was then an undeveloped infant. Today the Otto type of engine drives all of our motor cars and propels all of our airplanes. Yet under the practice that has been proposed recognition of the Otto engine would probably have been withheld on the ground of inferior utility. (See for descriptions of these engines and the history of their development, Columbia Motor Car Co. v. C. A. Duerr & Co. *et al.*, 184 Fed. Rep., 893.)

The progress of the useful arts has many turnings. It often seemingly turns backward, only to burst forth into new and unexpected channels. The invention of a new device which is not itself more useful than prior devices may be a step to a vantage ground from which further progress can be made. But suppose it is not. Suppose it is a plain step sidewise, with little possibility of an advance beyond the efficiency of the known device. As David Harum said, "There is no harm in doin' a little supposin'." Suppose, then, that a very efficient safety razor has been invented and patented. It can be made for, say, fifty cents. The manufacturer is in doubt as to whether more money may be made by selling it for one dollar or for three. He decides to sell it for three. Another inventor conceives of a safety razor which is not so durable or so efficient and which cannot be manufactured so cheaply. It can be made for, say, sixty cents and sold for one dollar, while the patented razor brings three. The newer razor we have supposed is inferior from every mechanical standpoint and costs more to make, yet thousands may be sold at one dollar. I believe it should be patentable.

It is admitted that a patent may enable the patentee to exact tribute from later inventors who have improved his device, but this is true whether the first device is superior or inferior to those in the prior art. In either case the patentee may suppress the improved infringing device. He may prevent the manufacture of an article which is better than his own. This is not only an argument against granting patents for things of inferior utility, but it is as well an argument against granting any patent whatever. Curtis says (Par. 54), "It is now

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too late in the history of civilization to question the policy of this protection, which forms a prominent feature in the domestic polity of every nation which has reached any considerable stage of progress in the arts of civilized life." The Hon. Elisha Foote, in an argument before the Committee on Patents in 1876, said, "It is within my remembrance when most of the women were employed in spinning and weaving, just as they were in the time of Homer. * * * Indeed, since the practical operation of the patent laws there has been more advance in all the practical arts of life than was made before in all the preceding ages of the world taken together." We must carefully avoid condemning inventions of lesser utility for reasons that apply to all other inventions as well.

The proposed practice of refusing patents because of inferior utility would undoubtedly result in delay in filing and discouragement both of invention and development. It would not stimulate invention or encourage the development of know instruments.

There could exist, then, only one other considerable reason for its adoption, which would be that it improved the fund of useful knowledge resulting from the patent system by leaving only what the examiner considered the most useful arts and instruments of each class. The Annual Report of the Commissioner, published in the first Official Gazette, page 65, says:

> In any one of the useful arts, a knowledge of the present state of that art—of what others have done in it—is essential and necessary to any person engaged in improving it. * * * without such knowledge no one of them can pursue his investigations intelligently or economically.

A short time ago the engineers of the General Electric Co. began work on an automatic lamp-making machine. This machine required the automatic performance of many functions. They instructed their representative here to send them, not merely patents for the most efficient machines for performing those functions, *but all the patents for machines performing those functions.*

The more nearly our patent system crystallizes and makes available the totality of human knowledge of science and the useful arts the more it will promote progress. Thert is no kind of reference work that is so disappointing and exasperating as an abridged edition. The

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ideal condition of the published art is not abridgment, but completeness.

Our conclusion must be, then, that the proposed change would neither stimulate invention, encourage development, nor improve the store of useful knowledge, but that by allowing the public to judge initially, as it must finally, the comparative utility of all inventions, we best promote the progress of science and the useful arts, because thus and thus only are we enabled to "prove all things and hold fast to that which is good."

RULES 49 TO 55, INCLUSIVE.

By D. W. EDELIN.

Rule 49.

The applicant for a patent is required by law to furnish a drawing of his invention whenever the nature of the case admits of it.

Every application for a patent must be accompanied by a drawing whenever the nature of the invention is a subject that can be illustrated. These drawings must conform to certain rules and regulations in order that uniformity of practice may be secured.

The statute requiring a drawing means a drawing showing what is described, and a part can not be omitted any more than the whole of it. The question is not whether the construction can be understood without a drawing, but whether it can be illustrated. *Ex parte* Edgerton, 101 O. G., 1131.

When possible, a drawing should be so complete that the purpose and operation of the invention may be readily understood by one skilled in the art by means of a mere inspection of the drawings. *Ex parte* Hartley, 97 O. G., 2746.

Rule 50.

The drawing may be signed by the inventor or one of the persons indicated in Rule 25, or the name of the applicant may be signed on the drawing by his attorney in fact. The drawing must show every feature of the invention covered by the claims, and the figures should be consecutively numbered, if possible. When the invention consists of an improvement on an old machine the drawing must exhibit, in one or more views, the invention itself, disconnected from the old structure, and also in another view, so much only of the old structure as will suffice to show the connection of the invention therewith.

This rule requires that the drawing must be signed by

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the inventor or his attorney, or as provided by Rule 25. When the inventor signs the drawing it is not necessary for the attorney to sign it and he will not be permitted to do so.

Printed or photolithographic signatures are not acceptable, but if filed they may be corrected by returning the drawing to the applicant or attorneys for correction.

If the inventor dies before the application is filed the name of the inventor and that of the executor or administrator, as the case may be, must be placed on the drawing. The inventor's name must always be placed after or under the word inventor, as, for example:

Inventor,
JOHN DOE, Dec'd.
RICHARD ROE, Executor
BY JOHN SMITH, Atty.

This rule further provides that every feature that is described or claimed must be illustrated in the drawing or the description thereof must be canceled from the specification and claims. When the invention relates to an improvement on an old machine there should be shown at least one view, or so much thereof of the old structure as will serve to illustrate the connection and relation of the improvement thereto. A few inventors illustrate the old structure by light lines, omitting all shading, which, in my opinion, makes a very effective showing, and when practicable this way of illustrating the old feature is recommended.

Rule 51.

Two editions of patent drawings are printed and published—one for Office use, certified copies, etc., of the size and character of those attached to patents, the work being about 6 by 9½ inches; and one reduction of a selected portion of each drawing for the Official Gazette.

This rule relates to the printing of two editions of the patent drawings—one for general use, which is reduced to about 6 by 9½ inches, and from these copies all examinations for references are made, also certified copies for courts, etc. The other edition is of a selected figure or figures which best illustrate the invention, to be used in the Official Gazette. As the figure or figures selected will be greatly reduced for printing, care should be exercised by the examiner in the selection to insure the best and complete illustration of the invention.

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Rule 52.

This work is done by the photolithographic process, and therefore the character of each original drawing must be brought as nearly as possible to a uniform standard of excellence, suited to the requirements of the process, to give the best results, in the interests of inventors, of the Office, and of the public. The following rules will therefore be rigidly enforced, and any departure from them will be certain to cause delay in the examination of an application for letters patent:

This rule provides for a uniform standard of drawings, and it might be well at this time to relate to you the first step taken when a drawing is filed in this Office.

All drawings are or should be filed in the mail room, where the stamp giving the date of receipt is placed on the back of each sheet; they are then sent to the draftsman's division, where they are examined and, if found to be of the correct standard, the draftsman's stamp will be put on the back at the upper left-hand corner of each sheet, and if rejected the reasons for such rejections will be noted on the drawing, and in your first action you are to inform the applicant of the rejection and the reason for such rejections as noted.

In examining these drawings the draftsman does not undertake to examine them as to their accuracy or as to whether there are too many sheets or useless illustrations, but only as to their standard of execution, and you are required to note after reading the specification any defect which you may find in the drawing. Frequently new drawings seem necessary and at times are necessary, but you are not at liberty to require new ones until after consultation with the Chief Draftsman as to whether or not the original drawing can be corrected.

Paragraph (a).

(a) Drawings must be made upon pure white paper of a thickness corresponding to two-sheet or three-sheet Bristol board. The surface of the paper must be calendered and smooth. India ink alone must be used, to secure perfectly black and solid lines.

The standard of paper must be white and correspond to two or three sheet Bristol board in thickness and the drawings must be made with India ink only.

Paragraph (b).

(b) The size of a sheet on which a drawing is made must be exactly 10 by 15 inches. One inch from its edges a single marginal line is to be drawn, leaving the "sight" precisely 8 by 13 inches. Within this margin all work and signatures

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must be included. One of the shorter sides of the sheet is regarded as its top, and, measuring downwardly from the marginal line, a space of not less than 1¼ inches is to be left blank for the heading of title, name, number, and date.

This sheet must be 10 by 15 inches, with a one inch marginal line from its edges. Within this marginal line and at the top of the sheet a space of one and a quarter (1¼) inches must be left blank for the printing of the title, name, number and dates, leaving the rest of the space for the drawing and signatures, all of which must come within the marginal line.

Paragraph (c).

(c) All drawings must be made with the pen only. Every line and letter (signatures included) must be absolutely black. This direction applies to all lines, however fine, to shading, and to lines representing cut surfaces in sectional views. All lines must be clean, sharp, and solid, and they must not be too fine or crowded. Surface shading, when used, should be open. Sectional shading should be made by oblique parallel lines, which may be about one-twentieth of an inch apart. Solid black should not be used for sectional or surface shading. Free-hand work should be avoided wherever it is possible to do so.

Provides that all drawings must be made with drawing instruments only, in order to secure clean, clear and sharp lines, which are absolutely necessary to secure a proper reproduction by photolithographing. All lines, including lettering and signatures, must be absolutely black.

Parts in section must be indicated by oblique parallel lines.

Solid black should only be used to indicate insulating material in elevation, but may be used to denote thin sheets of metal in section. (Mellin & Reid, O. G., 1037, 1910.)

Paragraph (d).

(d) Drawings should be made with the fewest lines possible consistent with clearness. By the observance of this rule the effectiveness of the work after reduction will be much increased. Shading (except on sectional views) should be used only on convex and concave surfaces, where it should be used sparingly, and may even there be dispensed with if the drawing be otherwise well executed. The plane upon which a sectional view is taken should be indicated on the general view by a broken or dotted line, which should be designated by numerals corresponding to the number of the sectional view. Heavy lines on the shade sides of objects should be used, except where they tend to thicken the work and obscure letters of reference. The light is always supposed to come from the upper left-hand corner at an angle of 45 degrees.

Surface shading, when properly executed, is not objec-

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tionable, especially when it seems necessary to bring out some particular surface or to clearly define the relations of various component elements, but it should not be allowed to be used merely to cover up or obscure the drawing without any meaning. The shading of concave and convex surfaces is desirable and helpful in the reading of a drawing. Shade lines should always be used and in many cases when not used they should be required when it is difficult to read the drawing without them.

The lines upon which a sectional view is taken must be indicated by the same numeral as that indicating such sectional view, as for example, Fig. 3 is a vertical section taken on line 3—3 of Fig. 1.

Paragraph (e).

(e) The scale to which a drawing is made ought to be large enough to show the mechanism without crowding, and two or more sheets should be used if one does not give sufficient room to accomplish this end; but the number of sheets must never be more than is absolutely necessary.

Drawings should be made on a sufficiently large scale to clearly illustrate the invention, but in no case should drawings be allowed where the scale is made unnecessarily large and spread over a number of sheets where it is possible that one or two sheets on a reduced scale would clearly illustrate the invention.

Paragraph (f).

(f) The different views should be consecutively numbered. Letters and figures of reference must be carefully formed. They should, if possible, measure at least one-eighth of an inch in height, so that they may bear reduction to one twenty-fourth of an inch; and they may be much larger when there is sufficient room. They must be so placed in the close and complex parts of drawings as not to interfere with a thorough comprehension of the same, and therefore should rarely cross or mingle with the lines. When necessarily grouped around a certain part they should be placed at a little distance, where there is available space, and connected by lines with the parts to which they refer. They should not be placed upon shaded surfaces, but when it is difficult to avoid this, a blank space must be left in the shading where the letter occurs, so that it shall appear perfectly distinct and separate form the work. If the same part of an invention appear in more than one view of the drawing it must always be represented by the same character, and the same character must never be used to designate different parts.

The different views should be consecutively numbered, and where possible the views should be consecutively placed on the sheets. Letters should not be used to designate figures. In lettering drawings mistakes are often

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made by using the same letter to denote different parts, which is objectionable and must be corrected, as the same part throughout the different views must be designated by the same reference character. While it is required that the drawing should be fully described, it does not seem necessary to describe in detail and letter such parts, for instance, as a bolt, the nut and head and hole into which it passes or fits, thus placing so many reference characters on the drawing that it obscures and makes it difficult to read. Lettering should be neatly and carefully formed and applied and must always read the same way on the sheet and should be large enough to bear reduction and still be read with ease.

Paragraph (g).

(g) The signature of the applicant should be placed at the lower right-hand corner of each sheet, and the signature of the witnesses, if any, at the lower left-hand corner, all within the marginal line, but in no instance should they trespass upon the drawings. (See specimen drawing, appendix.) The title should be written with pencil on the back of the sheet. The permanent names and title constituting the heading will be applied subsequently by the Office in uniform style.

There should be enough space left at the lower right-hand corner of the sheet for the signatures, as they must not encroach upon the drawing.

Paragraph (h).

(h) All views on the same sheet must stand in the same direction and must if possible stand so that they can be read with the sheet held in an upright position. If views longer than the width of the sheet are necessary for the proper illustration of the invention the sheet may be turned on its side. The space for heading must then be reserved at the right and the signatures placed at the left, occupying the same space and position as in the upright views and being horizontal when the sheet is held in an upright position. One figure must not be placed upon anotner or within the outline of another.

All views on the same sheet must read in the same direction, and, where possible, must be placed on the sheet so that it can be read when held in an upright position. This last requirement has never been insisted upon, but should be, and I believe an order in the near future will be issued requiring this in all drawings when possible. You can not too strongly encourage this practice.

There are times, however, when it is necessary in the preparation of complicated drawings to turn the sheet and put the views lengthwise in order to make them on as large a scale as possible. All views must be clearly

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defined on the sheet and in no instance should they encroach one upon the other.

Paragraph (i).

(i) As a rule, one view only of each invention can be shown in the Gazette illustrations. The selection of that portion of a drawing best calculated to explain the nature of the specific improvement would be facilitated and the final result improved by the judicious execution of a figure with express reference to the Gazette, but which must at the same time serve as one of the figures referred to in the specification. For this purpose the figure may be a plan, elevation, or perspective view, according to the judgment of the draftsman. All its parts should be especially open and distinct, with very little or no shading, and it must illustrate the invention claimed only, to the exclusion of all other details. (See specimen drawing.) When well executed, it will be used without curtailment or change, but any excessive fineness, or crowding, or unnecessary elaborateness of detail will necessitate its exclusion from the Gazette.

Paragraph *i*, which relates to the selection of a figure or figures to be illustrated in the Official Gazette, seems to be clearly defined and I have only one comment to make and that is that the selected figure should not be left altogether to the judgment of the draftsman who makes the drawing. The examiner should make this selection and where it is found that no figures on the drawing are sufficient for this purpose one should be required, otherwise the illustration is of no value in the Gazette.

Paragraph (j).

(j) Drawings transmitted to the Office should be sent flat, protected by a sheet of heavy binder's board; or should be rolled for transmission in a suitable mailing tube, but should never be folded.

Paragraph *j*, relating to the transmission of drawings, is of no special interest to you in connection with your duties, but perhaps you might be interested to know that a great many drawings are mutilated in the mails, which could be avoided if properly protected as indicated. The cost of reproducing these mutilated drawings, during the year, will amount to thousands of dollars, and the Office is burdened with the perpetual preservation and care of these drawings, which have to be canceled after new ones are substituted.

Paragraph (k).

(k) An agent's or attorney's stamp, or advertisement, or written address will not be permitted upon the face of a drawing, within or without the marginal line.

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Paragraph *k* means than anything printed, stamped or written on either the face or margin of the drawing which is in the nature of an advertisement of the agent or attorney is objectionable and must be removed.

Rule 53.

All reissue applications must be accompanied by new drawings, of the character required in original applications, and the inventor's name must appear upon the same in all cases; and such drawings shall be made upon the same scale as the original drawing, or upon a larger scale, unless a reduction of scale shall be authorized by the Commissioner.

This rule relating to drawings for reissue applications requires new drawings of the same general character as the original drawing and they must not be made on a smaller scale, unless the Commissioner otherwise directs, but may be enlarged, if desired. The same rules relating to drawings in original applications must be applied in reissue drawings.

Rule 54.

The foregoing rules relating to drawings will be rigidly enforced. A drawing not executed in conformity thereto may be admitted for purposes of examination if it sufficiently illustrates the invention, but in such case the drawing must be corrected or a new one furnished before the application will be allowed. The necessary corrections will be made by the Office, upon applicant's request and at his expense. (See Rule 72.)

Permits the chief draftsman to admit for the purpose of examination only a certain kind of drawing, if it sufficiently illustrates the invention, but which does not come up to the required standard of execution. These informal drawings may be rough and pale, lithographs on Bristol board, lithographs pasted on Bristol board, or sketches securely attached to Bristol board 10 by 15 inches. As these drawings form a part of the original application, they must be suitable for permanent records. Whenever the original drawings can be corrected they must be, as substitute drawings will not be accepted. The chief draftsman will give the cost of corrections or of new drawings if required. All corrections must be made only by the Office draftsmen. This applies to other employees of the Office as well as attorneys or inventors. Drawings will not be returned for any correction whatever when the correction can be made by the Office. When a signature has been omitted or needs correction the drawing may be returned to applicant or his attorney for this

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correction after a photo print of the sheet or sheets to be corrected as originally filed shall have been placed in the file for record. Or such signatures may be supplied or corrected by the applicant or his attorney within the Draftsman's Division, in which case a print will not be required.

Rule 55.

Applicants are advised to employ competent draftsmen to make their drawings.

The Office will furnish the drawings at cost, as promptly as its draftsmen can make them, for applicants who can not otherwise conveniently procure them.

Advises the employment of competent draftsmen to make drawings. This is good advice, but, unfortunately, competent draftsmen are scarce, owing principally to the small remuneration which they receive for this class of work. The Office will furnish drawings at cost if applicant can not otherwise conveniently have them made.

These are all of the rules relating to drawings, but before closing I should like to go over with you the present practice and some of the orders issued from time to time relating to this subject.

The proper procedure for amending a drawing is to require the applicant to furnish a print of the drawings as filed, having indicated thereon, preferably in red ink, the changes he desires to make, or he may file a sketch showing such change, which must be accompanied by a written request for permission to make the corrections.

Drawings must not be amended until after a written permission has been given by the examiner. (See *ex parte* Zuribel, O. G., May 31, 1904.)

Before a correction can be made in the construction of the drawing or the addition of a new figure, a photographic print of the sheet or sheets to be corrected as originally filed must be placed in the file to preserve the record. A print, however, is not required for purposes of adding or changing reference characters on the drawing, or for changing the inventor's name, or for transferring an original figure to another sheet in the application, which is often required, owing to cancellation or to reduce the number of sheets in the case.

When, after cancellation of one or more figures from a sheet of drawing the remaining figures on the sheet can

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be transferred to another sheet, it must be required. See Order 1862, which reads as follows:

> To prevent the accumulation of canceled sheets of drawings the examiner will not accept or admit additional or substitute drawings unless such drawings shall have been required, nor will the examiner require substitute drawings in any case unless the chief draftsman shall first indicate that the original drawing can not be made serviceable. The examiner will judge as to the sufficiency of the showing of the drawings and the chief draftsman will judge as to the execution and the arrangement of the views, etc., on the sheet.

When an additional sheet is filed and it is found that this illustration can be placed on the original drawing, it must be required, and this additional drawing, after a print of it has been placed in the file to be used as a sketch, must be returned to applicant after the transfer of the drawing to the original sheet or sheets has been made.

In cases where slight corrections are required and there can be no doubt about the application of them, such as the placing of a few reference characters or lead lines, or the changing of the numbers of figures of the drawing, do not require the applicant to make these corrections, but send or bring the case to the draftsman, who will make them, thereby saving not only time, but, in most cases, at least three letters—one by you, one by the attorney and one by the draftsman. We have about 100 cases of this kind every week to correct.

The Rules require that all records must be made in permanent ink. You will, therefore, return all pencil sketches to be inked in before making them of record in this Office. It is objectionable to show a modified form in a general view or principal construction by either dotted or full lines, and if shown at all it must be illustrated by a separate figure. (*Ex parte* Badger, 97 O. G., 1596.)

Abandoned and rejected drawings can be transferred to a new application by placing a photographic copy of them in the abandoned or rejected file, as the case may be. (Rule 173.)

Patent Office drawings are not supposed nor are they required to be working drawings. The only object is to aid in conveying to one skilled in the art the idea of the inventor. (Gold v. Gold, 152 O. G., 731.)

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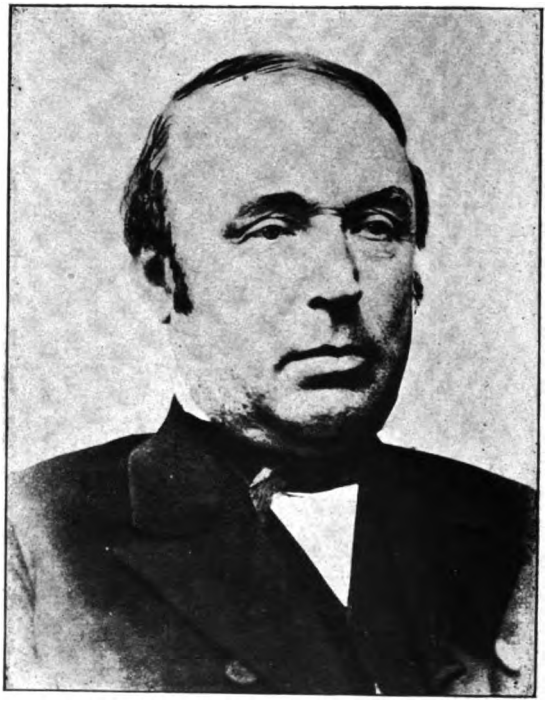
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EDMUND BURKE,
Commissioner of Patents.
1845 to 1849.

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VOL. I. AUGUST, 1919. No. 12.

EDITORIAL.

CAMPAIGN NOTES.

The recent visit to this Office of Mr. J. A. de Marval, Commissioner of the Argentine Government, brings into prominence the respect with which the American patent system and the Patent Office is viewed by other governments. Mr. de Marval visited Washington especially to study our system of granting patents with a view to making a report and recommendations on which improvements in the Patent Office of Buenos Aires may be based. That he was given every facility goes without saying.

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Information of the construction of the building, history of the Patent Office and system, copies of all official forms and publications, including copies of this JOURNAL, appeared especially interesting and are to be used in making his official report.

—■—

Attention is directed to the column headed "Of Personal Interest" in this issue. The disclosure of the resignation within six weeks of one principal examiner, two first assistants, six second assistants, two third assistants, one fourth assistant and one assistant examiner of trade-marks and designs, makes a rather startling record. The causes of the resignations are uniform—more money offered on the outside. As to the amount of salary increase, it is desired to state, from actual figures given, that the average increase over the Government salaries, with this year's bonus of $240 added, is almost exactly 30 per cent. It may be stated further that in the case of all assistant examiners who have resigned since May 1, 1919, their initial salaries closely approximate those set down for the respective grades in the bill now before Congress to increase the force and salaries in the Patent Office. The proposed salaries are, therefore, only what outside firms are willing to pay for the services of these men.

Should the present rate of retirement from the Office continue a serious impairment of the efficiency of the Corps must result.

As an offset to these resignations, the Civil Service Commission made certifications, from the May entrance examination, of eight eligibles, five of whom were already in the Office as temporary fourth assistants, leaving only three to fill the vacancies created.

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THE LEGISLATIVE SITUATION.

In the report of the Patent Committee of the National Research Council, printed in the March number of this JOURNAL, reference is made to three bills to be presented to Congress to carry into effect the recommendations of that committee. As these bills have now been introduced and hearings before the Patents Committee of the House had thereon, it seems proper to give a synopsis of the bills and to report upon the hearings. H. R. Bills Nos. 5011, 5012 and 7010 (substituted for H. R. Bill 6913) were introduced, the first two June 5 and the third July 8, by Hon. John I. Nolan, of California, chairman of the House Committee on Patents, and they were referred to his committee.

In addition, Senate Bill No. 818 was introduced May 26, by Hon. Robert L. Owen, of Oklahoma, and referred to the Senate Committee on Patents.

H. R. Bill No. 5011 is to establish a Patent and Trade-Mark Office independent of any other department and to provide for compensation and infringement of patents in the form of general damages, and for other purposes. The bill amends the following sections of the Revised Statutes: Secs. 440, 441, 475, 476, 479, 481, 483, 484, 486, 487, 496, 4898, 4906, 4921, 4934, 4935 and 4936; also the act of January 12, 1895 (chapter 23, section 73, twenty-eighth Statutes at Large, page 619). This bill creates an office known by its short title as the Patent Office, in which the Commissioner of Patents, the first and second assistant commissioners, and five examiners-in-chief, shall be appointed by the President. The Commissioner shall make all other appointments to positions in the Office.

By Section 481, the Commissioner shall also sign all requisitions for the advance or payment of money out of the Treasury upon estimates for expenditures for business assigned by law to his Office; and shall generally perform all acts heretofore performed by the Secretary of the Interior with relation to the Patent Office.

By Section 487, the Commissioner has full control in the matter of prescribing regulations governing the recognition of agents, attorneys or other persons representing applicants or other parties before the Office, and also

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the disbarment of attorneys from practice before the Office.

By Section 496, all disbursements for the Patent and Trade-Mark Office shall be made by the disbursing clerk thereof, or, in his absence, by the chief clerk, upon express order by the Commissioner.

By Section 4934 the rates for patent fees are made as follows:

On filing each original application for a patent, except in design cases, $20. (Heretofore $15.)

On issuing each original patent, except in design cases, $15. (Heretofore $20.)

Other fees remain substantially the same.

H. R. Bill 5012 is to establish a United States Court of Patent Appeals, and for other purposes.

The bill creates said court, consisting of seven judges, and prescribes that a term of said court shall be held annually in the city of Washington, beginning on the second Monday in October in each year.

The chief justice of this court shall be appointed by the President, by and with the advice and consent of the Senate. The salary attached to this office shall be $12,000 a year.

The Chief Justice of the Supreme Court of the United States shall designate from among the circuit and district judges of the United States six judges to sit as associate justices of the United States Court of Patent Appeals, three to sit for three years from the first day of the first term and three to sit for six years from the first day of the first term. After that, appointments of associate judges shall be for six years. A salary of $11,500 per year is attached to this office.

This court shall have jurisdiction to hear and determine appeals in all cases from decisions rendered by any other court having jurisdiction in the first instance, in all cases arising under the patent laws of the United States. It shall have no jurisdiction over cases arising in the Court of Claims.

Any case under the jurisdiction of this court can be certified to the Supreme Court of the United States for review or determination by writ of certiorari or otherwise.

After taking effect of this act, no appeal or writ of

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error shall be taken from any district court to any circuit court of appeals or any other court heretofore having jurisdiction on appeal of patent cases.

From the taking effect of this act all appeals and writs of error within the jurisdiction of this court which shall have been pending without hearing in other appellate jurisdictions for less than three months shall be transferred to this court without further payment of fees. All other appeals and writs of error which shall be pending in appellate jurisdictions shall remain and be heard and determined by the courts in which they may be pending.

Senate Bill 818 is for the same purpose as H. R. Bill 5012 and is precisely like the latter, except that it provides that the court shall be made up of five judges instead of seven.

H. R. Bill 7010 is to increase the force and salaries in the Patent Office. The proposed changes are best set forth, perhaps, by means of the following table, giving present and proposed force and salaries, with totals of appropriations.

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The Bill is a straight appropriation measure:

Changes in Force and Salaries under { H. R. 6913 / H. R. 7010

	Present Force. No.	Salary.	Total.	Proposed Force. No.	Salary.	Total.	Increase.	Decrease.
Commissioner	1	$5,000	$5,000	1	$7,500	$7,500	$2,500	....
1st Asst. Com.	1	4,500	4,500	1	6,000	6,000	1,500	....
Asst. Com.	1	3,500	3,500	1	5,000	5,000	1,500	....
Chief Clerk	1	3,000	3,000	1	4,200	4,200	1,200	....
Law Examiners	5	2,750	13,750	7	4,200	29,400	15,650	....
Class. Examiner	1	3,600	3,600	1	4,200	4,200	600	....
Examiners in Chief	5	3,500	17,500	5	5,000	25,000	7,500	....
Interfer. Examiners	2	2,700	5,400	2	4,200	8,400	5,000	....
Exr. T. M. & D.	1	2,700	2,700	1	4,000	4,000	1,300	....
1st Asst. T. M. & D.	1	2,400	2,400	1	3,300	3,300	900	....
2nd Asst. T. M. & D.	..	....	....	2	2,700	5,400	5,400	....
3rd Asst. T. M. & D.	..	....	....	2	2,200	4,400	4,400	....
4th Asst. T. M. & D.	..	....	....	6	1,800	10,800	10,800	....
Asst. Exr. T. M. & D.	6	1,500	9,000	..	....	....	....	$9,000
Prin. Examiners	45	2,700	121,500	50	4,000	200,000	78,500	....
1st Assts.	90	2,400	216,000	150	3,300	495,000	279,000	....
2nd Assts.	90	2,100	189,000	150	2,700	405,000	216,000	....
3rd Assts.	90	1,800	162,000	125	2,200	275,000	113,000	....
4th Assts.	90	1,500	135,000	125	1,800	225,000	90,000	....
Financial Clerk	1	2,250	2,250	1	2,500	2,500	250	....
Librarian	1	2,000	2,000	1	2,700	2,700	700	....
Chfs. Non Ex. D.	8	2,000	16,000	8	2,500	20,000	4,000	....
Asst. Chiefs	3	1,800	5,400	8	2,100	16,800	11,400	....
Translator	1	1,800	1,800	1	2,000	2,000	200	....
Asst. Translator	..	....	....	1	1,600	1,600	1,600	....
Private Secretary	1	1,800	1,800	1	2,000	2,000	200	....
Clks. Cl. 4	9	1,800	16,200	22	1,800	39,600	23,400	....
Clks. Cl. 3	9	1,600	14,400	33	1,600	52,800	38,400	....
Clks. Cl. 2	17	1,400	23,800	100	1,400	140,000	116,200	....
Clks. Cl. 1	135	1,200	162,000	125	1,200	150,000	....	12,000
Clerks	91	1,000	91,000	100	1,000	100,000	9,000	....
Draftsmen	3	1,200	3,600	1	1,800	....	....	....
Draftsmen	..	....	....	3	1,600	6,600	3,000	....
Draftsmen	4	1,000	4,000	3	1,400	4,200	200	....
Copyists	90	900	81,000	40	900	36,000	....	45,000
Copyists	30	720	21,600	..	....	....	....	21,600
Messengers	3	840	2,520	3	840	2,520	....	....
Asst. Messengers	33	720	23,760	33	720	23,760	....	....
Laborers	13	600	7,800	13	660	8,580	780	....
Ex'r's Aids	45	600	27,000	50	600	30,000	3,000	....
Copy Pullers	24	480	11,520	24	600	14,400	2,880	....
	951		$1,413,300	1202		$2,378,660	$1,047,960	$87,600

Net increase, $960,360.

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In addition to the above, the folowing appropriations are proposed:

For special and temporary services of typewriters for furnishing manuscript copies of records, $7,500.

For purchase of law, professional and scientific books and for transporting copies of United States patents to foreign governments, $10,000.

For producing weekly issues of patents, reproduction of exhausted copies, etc., $140,000.

For investigating questions of public use or sale and such other questions arising in connection with applications for patents as may be deemed necessary by the Commissioner, $2,500.

Hearings on the three House bills were granted and held during several days beginning July 9, before the House Committee on Patents.

The members of this committee are as follows:

John I. Nolan of California, Chairman.
Florian Lampert of Wisconsin.
Loren E. Wheeler of Illinois.
Albert H. Vestal of Indiana.
William J. Burke of Pennsylvania.
Albert W. Jefferis of Nebraska.
John MacCrate of New York.
Guy E. Campbell of Pennsylvania.
John B. Johnston of New York.
John J. Babka of Ohio.
Edwin L. Davis of Tennessee.
John McDuffie of Alabama.

As Secretary of the National Research Council's committee, Mr. E. J. Prindle had made the arrangements for these hearings and he introduced the several speakers. It is not proposed here to give the arguments presented by the speakers, but it is hoped in future issues of this JOURNAL to print in full, or in substance, the admirable presentations of views advanced by as many of these distinguished gentlemen as space will permit.

Mr. Prindle opened the discussion by a clear statement of the objects of our patent system and the important part it has played in the upbuilding of the industrial enterprise and prosperity of the nation. Admitting certain weaknesses in the system, Mr. Prindle briefly explained how the pending bills were designed to correct them. He gave way to

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Mr. Frederick P. Fish, dean of the American patent bar and member of the Patent Committee of the National Research Council.

Mr. Fish spoke in favor of all the bills, but laid especial emphasis on the need of a single court of patent appeals. His experience of a lifetime, spent largely in the handling in court of patent causes, gave his address a grasp and profoundess which evidently impressed the committee. When Mr. Fish had finished Mr. Prindle resumed with his general exposition of the bills, and then introduced

Dr. Leo H. Baekeland, member of the National Research Council and of its Patent Committee, inventor of Velox photographic paper, Bakelite and other well-known inventions.

Dr. Baekeland spoke from long experience in taking out patents and in litigating them in the courts. He complimented the Office and courts on their evident intentions and efforts to give the inventor full justice. He made no complaint. He did, however, criticise the conditions that led to hurried Office actions on pending cases and the indeterminateness of litigation in the courts. He approved heartily the bill for increase of force and salaries in the Office and emphasized the dignity and responsibility of the position of examiner. He hoped these places would be made the equal, if not the superior, of similar places in the patent offices of England and Germany.

Dr. Baekeland interrupted himself to allow the introduction of

Hon. Thomas Ewing, late Commissioner of Patents and member of the Patent Committee, National Research Council. Mr. Ewing developed in his remarks the essential difference between a registration system and an examination system and the advantages of the latter when adequately carried out. He dwelt upon the danger of the examination system degenerating into little more than a registration system unless conditions in the Patent Office be improved. Based on his experience while Commissioner, he deplored the ill-success attending previous efforts to get adequate increases in force and salaries for the Office. Upon request by the committee, he promised to submit his opinions on the bill for the Court of Patent Appeals.

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Dr. Baekeland then concluded his remarks and was followed by

Mr. William J. Kent, Inventor, Development Department of the United States Rubber Co., who dwelt particularly on the force and salaries bill. He illustrated the inadequacy of Government salaries by comparing the salary of Patent Office draftsmen with that paid by his company.

The next speaker was

Mr. Elmer A. Sperry, member of the Naval Consulting Board, inventor of the gyroscopic compass, gyroscopic stabilizer for ships and aeroplanes, etc.

Mr. Sperry explained the intricate principles of his inventions to the committee and used the same to bring out the need of men trained in science to treat applications in the Office covering these and similar inventions. He favored unqualifiedly the three bills under consideration.

Mr. Milton Tibbetts, chairman of the Patent Committee of the National Association of Manufacturers and representing the Packard Motor Car Co., then took the floor. He spoke in favor of all three bills, paying especial attention to the force and salaries bill. He said both his company and the Manufacturers' Association were behind the bills and proposed to exert all proper influence they could with members of Congress in favor of the passage of the bills.

On Friday, July 11, **Hon. Judge Learned Hand**, of the Southern district of New York, spoke interestingly in favor of all the proposed measures. His long experience on the bench and his eminence in the profession commanded the close attention of the committee. His emphatic commendation of H. R. Bill 7010 was greatly appreciated by interested listeners from the Office. He was followed by

Mr. Frank J. Sprague, member of the Naval Consulting Board, designer and builder of the first electric trolley system in America (Richmond), inventor of the commercial electric elevator and of the multiple unit control system of electric railways.

Mr. Sprague was able to speak from his great experience and gave a most interesting exposition of the difficulties and enormous expense attendant upon the commercial introduction of new inventions. He spoke of the

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difficulties he had had with inexperienced and partially qualified examiners and approved higher salaries for them as a means to secure better trained men. He was in favor of a single Court of Patent Appeals and argued that it would do away with the present discouraging prolongation of patent suits.

Mr. Wesley G. Carr, representing the Westinghouse Electric and Manufacturing Co., and chairman of the Patent Committee of the Electrical Manufacturers' Club, and **Mr. Delos Holden**, representing Thomas A. Edison, both former members of the Examining Corps, spoke the same day, advocating all three bills. Both were questioned by the chairman and members of the committee on the suppression of inventions by large manufacturers and Mr. Holden particularly on the proposal of Mr. Edison to protect the inventor by forbidding the complete alienation of his rights.

Mr. Charles L. Sturtevant, chairman of the Committee on Rules and Laws, American Patent Law Association, was the first speaker July 12. His remarks were largely directed to Bill No. 5011, and he presented some specific amendments to the bill relating to the registration of attorneys, separations, disbarments, etc., and spoke mostly on their subject-matter.

Hon. James T. Newton, Commissioner of Patents, followed Mr. Sturtevant and addressed the committee at length on the wonderful effects of our patent system and the necessity for its retention in substantially its present form, as being eminently favorable to the inventor.

He strongly favored the Court of Patent Appeals bill and the bill for increase of force and salaries. He submitted much important and interesting data and many statistics on existing conditions in the Patent Office and filed numerous record exhibits in support of the points he made.

Mr. M. H. Coulston, Chief Clerk of the Patent Office, did not speak before the committee for lack of time, but, on permission granted, has filed a full statement of existing conditions among the clerks and examiners of the Office and reasons why the Patent Office Society and officials are urging the passage of H. R. Bill 7010.

On July 17 hearings were resumed and

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Mr. Thomas Robertson, President of the American Patent Law Association, was heard in a review of the situation. An interesting feature was his demonstration of the work of a member of the Examining Corps.

Mr. Bert Russell, a member of the Examining Corps and Secretary of the Patent Office Society, was heard briefly in defense of a compromise proposal regarding the personnel of the Court of Patent Appeals and in regard to specific features of Bill 5011, regarded by him as important incidents of the proposed legislation.

Besides those who spoke at the hearings, others, including **Mr. R. A. Brannigan,** of the National Automobile Chamber of Commerce, were permitted to present views and arguments by letters and briefs.

The hearings, as a whole, developed an encouraging unanimity of feeling between the speakers and the members of the House Committee. Only on some details did there seem to be a variance. Particularly there appeared no substantial objection to Bill 7010.

Mr. Nolan stated July 9, on the floor of the House, that it is the intention of the Patents Committee to make the same a working committee of the House, and to try during this Congress to enact some legislation that will be of real benefit to the inventors and manufacturers of this country.

It is felt that the hearings reported above have given the committee information and inspiration to go forward promptly in Mr. Nolan's announced plan.

IMPORTANT.

SUBSCRIPTION RENEWALS

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EDMUND BURKE,

Commissioner of Patents, 1845 to 1849.

By N. J. BRUMBAUGH.

The second Commissioner of Patents was born at Westminster, Vermont, January 23, 1809. He studied law and was admitted to the bar in 1829, practicing at Newport, New Hampshire. He established the New Hampshire Argus and edited it for several years. He was elected as a democrat to the 26th, 27th and 28th Congresses, 1839 to 1845. Appointed Commissioner of Patents by President Polk May 5, 1845, he served ably and faithfully in this office until May 9, 1849, after which he became for a brief period associate editor of the *Union* in Washington, D. C., and later resumed the practice of law at Newport, New Hampshire, and Boston, Massachusetts. His death occurred at Newport, New Hampshire, in 1882.

At the beginning of his administration the examining force consisted of two principal and two assistant examiners, the principals being Charles G. Page and W. P. N. Fitzgerald, and the classes of invention were twenty-two in number.

In his first report to Congress, February 24, 1846, he urged legislation authorizing the Chief Clerk to act as Commissioner of Patents in the absence of the Commissioner, giving the Commissioner power to "enlarge the claim of the patentee" in a reissue, and reducing the fees required of foreign inventors. The Republic of Texas having become part of the United States, he urged Congress to provide for the transfer of the records of the Patent Office of Texas to this Office. This allusion to Texas is interesting as showing the wisdom of the founders of that great state in their appreciation of inventions and inventors.

In the report for 1846, the Commissioner says: "The operations of this Office during the past year prove, as the circle of every year proves, that the inventor is ever the benefactor of his race. His genius bestows its favors on all. The manufacturer, the mechanic, the agriculturist, the merchant, all are the recipients of the benefits which are ever flowing from his toils, energies, and some-

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times his great and sublime conceptions. No theme is more interesting for contemplation than this and there is none which more deeply impresses the mind with a sense of the continued and onward progress of society in the grand career of civilization."

This early Commissioner had occasion to criticise Congress in failing to provide for the necessary help to get off the work. "The Office is seven or eight months in arrear of its business and is daily becoming more and more embarrassed. Thus have I in five separate communications to Congress and its appropriate committees within the last two years made full expositions of the embarrassed condition of this Office growing out of its greatly increased and increasing business and the inadequacy of its force to perform its duties."

On May 27, 1848, the salary of the principal examiners was raised from $1500 to $2500 and that of the assistants from $1250 to $1500. Referring to the standard of the work performed by the examiners, he says: "The rigid examinations now made in the Patent Office with regard to originality and patentability of new discoveries and improvements result in the rejection of a much larger proportion of the applications than formerly when a less scrutinizing system of examination was pursued. The proportion of applications patented to those rejected is now about two to three, whereas formerly about half were patented."

One of the defects in the patent laws regretted by the Commissioner was the inadequacy of the protection to the patentee from "wilful infringers who are as bad as common thieves." "If his invention were not required to undergo a severe and critical examination in reference particularly to its novelty and originality at the Patent Office, there would be some propriety in making his patent merely *prima facie* evidence of title in suits for infringement. But after it has passed such an ordeal, one trial at least in a court of justice had in good faith upon the merits of the invention should be sufficient to establish its validity and secure to the patentee an undisturbed enjoyment of his property until the end of the term of his exclusive privilege."

Commissioner Burke had to dispose of the notable interference of S. F. B. Morse and Alexander Bain for

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certain improvements in electric telegraphs. The history of the beginning of this interference is related as follows in the report of 1848: "It appears from the records of the Office that the application of said Alexander Bain was made April 18, 1848; and upon examination of his claim it was found that the before-mentioned claims could be admitted to patent, no invention of like character appearing in the public records of this Office, nor in any printed publication.". Before sending the application to patent, however, the "secret archives" were consulted and another interfering application was found.

Under appointment from President Polk, Chief Clerk Henry H. Sylvester was empowered to act as Commissioner of Patents in the absence of the Commissioner.

During his service in Congress Mr. Burke was an indefatigable worker in committee, but seldom spoke upon the floor of the House. He favored direct taxation and was an advocate of free trade. The only speeches he ever made in Congress were called forth by tariff matters. His first speech was in defense of New Hampshire; it was instigated by a speech of Representative Arnold, a Whig member from East Tennessee, who, in the course of debate on the tariff, made slighting and contemptuous utterances regarding that "sterile piece of earth." In a curious introductory apology for burdening the House with his remarks, Mr. Burke disclosed the small value he placed upon oratory and the high value he set upon work in committee, then launched into a truly eloquent tribute to the state he represented, and then marshalled an effective array of statistics comparing New Hampshire with Tennessee, and especially East Tennessee, to the disadvantage of the latter. At the close of his remarks Mr. Burke sent up to the Clerk's desk a story involving a one-time associate of Mr. Arnold in the Tennessee Legislature. The story described a speech, eulogistic of President Tyler and the State of Virginia, in which the orator placed Plymouth Rock and the Pilgrim Fathers in the "Old Dominion, the Mother of Presidents," and Burke insinuated that the incident was illustrative of the knowledge of historical facts to be expected from Tennessee legislators. This defense of New Hampshire aroused Mr. Arnold to such a degree that he indulged in a bitter and insulting personal attack upon Mr.

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Burke, in which the House interfered and the debate was stopped only by a motion to adjourn. Mr. Burke's most important speech was upon the tariff, and exhibited painstaking care and an array of statistics gathered at great labor. He was also the author of a resolution admitting the Republic of Texas into the Union.

While Commissioner of Patents Mr. Burke made an able technical report on "Steam Boiler Explosions," published December 30, 1848, Senate Ex. Doc. No. 18. In 1846 he published a series of twelve important essays on "The Protective System Considered in Connection with the Present Tariff."

The agricultural reports begun by the Patent Office during Commissioner Ellsworth's administration grew to such popularity in Commissioner Burke's administration as to create demands for reprinting and excite the comment of Congress on the enormous number of requests for them. It was said on the floor of the House by Mr. Badger: "All I know upon the subject is that there is no book published which is more generally sought for by plain men, unconnected with politics, and from which, if we may suppose and presume they are adequate judges, they derive material assistance in the prosecution of their agricultural pursuits." Many other comments of a similar character were made in debate upon the proposition to reprint these reports in 1849.

The following tribute to the great work of the inventor shows Commissioner Burke to have been a worthy pioneer in a long line of able men who have honored this great office:

> Many valuable and profitable discoveries in the arts are the result of a sudden and lucky conception in a happy moment; but most of them are the fruits of days and years of incessant toil, anxious and harassing thought and great pecuniary sacrifice. This toil, this mental effort and these pecuniary sacrifices establish a title to the patent which is their offspring, as sacred and irrefragable in the eye of justice as the title to his farm, his workshop or his merchandise, which a man has acquired by his labor, skill and economy. Some of the inventions of the last few centuries have burst upon the world with the brilliancy of the morning sun, changing the whole aspect of society and conferring incalculable benefits upon the human race.

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DEBATE ON A BILL TO INCREASE FORCE AND SALARIES IN THE PATENT OFFICE.

Thirtieth Congress, First Session.

(Extracts from the Congressional Globe.)

December 29, 1847.

Senate.

Mr. Westcott (Florida), from the Committee on Patents and Patent Office, reported a bill to provide for additional examining clerks in the Patent Office.

January 4, 1848.

House.

Mr. Farrelly (Pennsylvania) reported bills to provide for additional examiners in the Patent Office.

February 1, 1848.

Senate.

The Senate proceeded to consider the bill to provide additional examining clerks in the Patent Office, etc. Mr. Westcott explained that the amendment was simply a substitution of the bill introduced in the House of Representatives, which was considered as more satisfactory than the bill which had originated in the Senate. * * * The amendment was agreed to and the bill was reported to the Senate as amended. The amendment having been concurred in, the bill was read a third time and passed.[1]

February 8, 1848.

House.

Mr. Farrelly stated it was important that this bill should pass immediately.

Mr. Henley (Indiana) urged immediate action on the

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1 This bill, among other provisions, provided for two additional examiners at $2500.00 and two additional assistant examiners at $1500.00. At that time the salary of examiners was $1500 and of assistants $1250.

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bill as indispensably necessary to give a speedy examination to applications for patents. There was now a deficiency in the number of examiners * * * Competent examiners must be men of science and commanded larger salaries in other places than they were receiving in the Patent Office. The proposed increase of salaries was necessary and involved no expenditure of money from the treasury, as it came from the Patent Office fund.[2]

Mr. A. Johnson of Tennessee questioned whether there was a patent fund. There might be nominally, but had certain expenses been deducted the Office would be found largely in debt.

Mr. Farrelly, in explanation of the bill * * * said the bill proposed to fix the salaries of the principal examiners at $2500 and of the assistant examiners at $1500. The office of principal examiner was one which required scientific attainments and partook of the nature of a judicial office. * * * Compared to the salaries of other scientific officers of a like grade, $2500 was a small salary. * * * The petitioners—the inventors—asked that the salary of a principal examiner should be made $3000, but the committee, with a view to economizing as far as possible, fixed it at $2500.

Mr. A. Johnson of Tennessee moved to amend the bill by reducing the amount of salaries as provided by the bill from $2500 to $2000. * * * He saw no necessity for the increase of salary; he thought competent men could be obtained to perform these duties for the compensation proposed.

Mr. Toombs of Georgia concurred in the view of Mr. Johnson and wished the gentleman would carry his amendment further and bring down the salary to $1500. He held it was totally unnecessary to pay a salary of $2500 to these examiners. It was as much as the judges and the most honorable state officers received. * * * The increase proposed was unnecessary and profligate

2 The Act of July 4, 1836, Section 9, provided "And the moneys received into the Treasury under this act shall constitute a fund for the payment of salaries of the officers and clerks herein provided for, and all other expenses of the Patent Office, and to be called the patent fund." By Act of July 20, 1868, the "patent fund" was abolished and all moneys received by the Patent Office were required to be paid into the public funds in the Treasury. The cost of the agricultural reports was paid from the patent fund.

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expenditure of the public money and he wished the attention of Congress could be brought to it. As to the justification that had been brought forward that there was a patent fund out of which these salaries and other expenses were paid, so as not to become a charge upon the treasury, it was all ideal; the department was indebted to the Government hundreds of thousands of dollars.[3]

To be sure, a fund could be kept on hand by the Government paying all expenses of the Office, and its retaining all its receipts. But, in fact, the Office was largely in debt and the salaries were paid out of the public treasury, and he held they were sufficient.

Mr. King of Massachusetts obtained the floor, but yielded to give Mr. A. Johnson an opportunity to modify his amendment in compliance with the suggestion of Mr. Toombs. He reduced the salary as proposed by it to $1500.

Mr. King, resuming the floor, opposed the amendment and advocated the bill as presented by the committee. There was on hand, he said, a large reserved patent fund which had resulted from the payments by inventors; and every man who had contributed to this fund was entitled to speedy justice in having his application for patent passed upon without unreasonable delay. At the time when this salary of $1500 was fixed by law there were something like seven hundred applications pending annually; now there were more than fifteen hundred. * * * But the business of the Office had accumulated in greater proportion than the increase of the number of cases.

The duties of the examiners of the Patent Office were much more important and required a greater amount of

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3 The additional appropriation act, approved July 4, 1836, provided for the erection of a fireproof building with suitable accommodations for the Patent Office, appropriating $108,000, to be paid out of the patent fund. The building erected in accordance with this act was what is now the south wing of the Patent Office. The total cost proved to be $442,011.65, of which $108,000 was paid out of the patent fund; the balance of $334,011.65 was paid out of the general funds in the Treasury. This sum of $334,011.65 was the indebtedness referred to by Mr. Toombs. This building was never occupied by the Patent Office exclusively until the autumn of 1917, the Patent Office having always shared it with other bureaus. After the creation of the Interior Department it was occupied by the Secretary of the Interior chiefly.

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experience and scientific attainments for their proper discharge than those of any clerkship under the Government. They might compare favorably with the duties of the judges of our highest courts. There was not in any department of the Government an officer of whom so much was required nor who was so poorly paid. * * *

The very money paid to the examiners of the Patent Office was placed there by the inventors who came and asked their applications to be examined, who asked speedy justice. * * * The officers placed there should be competent men, and salaries adequate to procure the services of such men should be paid. * * * We could not expect to procure the services of any man of requisite qualifications for $1500. Justice to this department of the Government, justice to the men employed in it, and, more than all, justice to the inventors who were doing so much in scientific investigation for the character of this country required that the proposed increase should be made. * * *

Mr. Ingersoll (Pennsylvania) proceeded to speak of this highly interesting property, this intellectual property, which for the first time in the United States of America had been put on something like a respectable footing. * * * He knew that this was a subject that required the greatest public attention, and he must totally dissent from the view expressed by the gentleman from Georgia. * * * He denied that the standard which the gentleman had assumed of state salaries was any criterion of what salaries should be. * * *

He voted for the highest compensation here on the principle that he believed it was the cheapest, that it was true economy. * * * He was an economist on large occasions; and he thought a great deal of public money might be saved; but the cutting down of a salary from $2500 to $2000 did not answer the purpose—did not result in any good. He recurred to the importance and interest of this kind of property—the property of the intellect and genius—that which shed lustre upon the American name in distant climes, and to the necessity of having it fully protected. To this end competent examiners were necessary and they should be paid an adequate salary. * * *

Mr. Henley remarked that he rarely if ever differed

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from his friend from Tennessee on a question of retrenchment, but was compelled to do so at this time. * * * Fifteen hundred dollars, it was said, was a compensation large enough for these examiners of the Patent Office. As had properly been said, he had to pass upon the applications for * * * patents, an error in the decision upon which gave rise to long and expensive law suits, as a consequence curtailing the advance of scientific inventions in the community. Was it not better in every view—more economical, more just both to the inventors and to the public—to give sufficient salaries to have the duties correctly performed in the first instance? * * * The gentleman from Tennessee had told them that the Patent Office building had cost the Government three or four hundred thousand dollars. * * * Would the gentleman from Georgia or the gentleman from Tennessee attempt to estimate the incalculable benefits derived from the great inventions of Whitney, and Fulton, and Morse? Would they speak about the Patent Office and the Patent System, which had encouraged these and other stupendous achievements of science and inventive genius which went so far to distinguish our age from all that had preceded it, being in debt to the Government?

There were reasons why in this case he voted for what was called a high salary; but unjustly so, he thought. The compensation proposed was necessary to procure the services of competent men, and it was paid out of the patent fund, which was received from inventors, whose claims public justice, as well as justice to themselves individually, demanded should be passed upon with as little delay and upon as enlightened and correct principles as possible.

March 1, 1848.

The Speaker announced as the business first in order the bill of the Senate "providing additional examiners for the Patent Office" * * * the question being on the amendment of Mr. Johnson of Tennessee, viz., to strike out the sum of $2500 as salaries to the examiners and insert $1500, on which the previous question was moved and seconded and the main question ordered. The question now was on the main question, viz., to strike out

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$2500 and insert $1500; and it was decided in the negative, yeas 79, nays 105. So the amendment was rejected.

Mr. Johnson of Tennessee was desirous to move an amendment to reduce the salary of the Commissioner of Patents five hundred dollars,[4] and as that officer agreed with him in politics he should not expose himself to the charge of being actuated by party feelings. * * * Mr. J. then defended himself from the charge that he was opposed to the arts and sciences. He examined the nature of the duties of the examiners of patents and contrasted their labors with those of their fellow citizens of all ranks and professions, contended that they did not labor six hours a day,[5] while they were paid better than state officers.

March 2, 1848.

Mr. McClelland (Michigan) moved to amend the bill by striking out $2500 as the salaries of examiners * * * and inserting $2000 and moved the previous question. The amendment was agreed to, bill read a third time and returned to the Senate.

March 20,1848.

Senate.

Mr. Westcott, from the Committee on Patents and the Patent Office, to whom was referred the amendments of the House to the bill of the Senate to provide additional examiners in the Patent Office and for other purposes, reported thereon, with a recommendation that the Senate disagreed to the amendments of the House.

Mr. Turney (Tennessee) said * * * he believed that the salary of an examiner of patents was now some fifteen or eighteen hundred dollars and he knew of no good reason why it should be raised to twenty-five hundred. He thought this was hardly an appropriate time for an increase of salaries, when the country was involved in war, and had no superabundance of revenue to dispose of. * * *

Mr. Westcott remarked that all the members of the

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4 The salary of Commissioner Burke was $3000.

5 The hours of labor in the Patent Office were from 8:30 A. M. to 3:30 P. M., without intermission.

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committee were unanimous in disagreeing with the amendments of the House. * * * The bill as it originally passed the Senate, he said, gave to each of the examiners in the Patent Office a salary of twenty-five hundred dollars. The House amendment proposed to reduce it to two thousand * * * those having business with the Patent Office considered it as a matter of the very first importance, as we are obliged to have men of the highest scientific attainments. * * * The Senate will perceive the necessity for an increase of salary when I state the fact that within the last five years examiners who have received eighteen hundred dollars a year, finding that the salary was not adequate to the service required and that they could make twice as much money by acting as agents, have resigned their offices. I think the salary proposed is not too large; and I will mention the fact that the money does not come out of the treasury. The law provides that it shall be taken from the receipts of the Patent Office, and that Office has already a fund of some seventy thousand dollars. I hope the Senate will concur with the recommendation of the committee. * * *

Mr. Dickinson (New York): This is simply a question of demand and supply. In my judgment a salary of twenty-five hundred is necessary, for the reason that you cannot get competent men for a smaller salary. The office cannot be filled by mere politicians or mere clerks. The gentleman filling that office must be an encyclopedia of science * * * in short, he must be qualified for one of the learned professorships in our institutions of learning. Now, you cannot get men possessing these qualifications for less than twenty-five hundred dollars a year. The number of such men is comparatively small; the demand is greater than the supply. You can get men to take that office for one thousand dollars a year, but you cannot get men who are qualified to discharge the duties for that sum. I am not for high salaries generally, but this is one of those cases which require liberal salaries. * * *

Mr. Johnson (Louisiana): Well, I hope the Senate will disagree to the amendment. A salary of twenty-five hundred dollars is quite a low one. The duties are laborious, and they require men of the highest attainments.

Senate disagreed with amendment made by the House reducing salary of examiners to $2000.

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May 4, 1848.

House.

Bill returned from the Senate with a disagreement in amendments.

May 17, 1848.

Mr. Farrelly, from the committee of conferees on part of the House * * * made a report which recommended that * * * the House recede from its amendment striking out the words "twenty-five hundred dollars and inserting two thousand dollars."

Mr. McClelland explained the action of the committee of conference and the result of their declarations, in which he concurred, except in relation to the salaries of examiners of patents. The House, after full discussion, had decided that $2000 was ample remuneration for the services rendered. The Senate had so amended the bill as to make the sum $2500. But he felt bound to resist the Senate amendment, as the will of the House had been expressed after mature deliberation so unequivocally. It had been said that the sum of $2000 was an insufficient remuneration and that these examiners could make a larger sum by leaving the Office and becoming patent agents. He admitted that science commanded more when it was free and independent than when it was employed by the Government. A member of the bar could make more than $3000 or $5000, and yet no State gave its judges more than $1500 or $2000, and for such salaries good judges were obtained. It was not the policy of the Government to give extravagant salaries, and whenever an officer found he could make more out of the office than in he could go out. He thought if any change were requisite it was in the number of examiners. He was of the opinion the number was too small. * * * The salary fixed by the House, with the increase of the number of examiners, would be sufficient and proper. Why, the heads of bureaus, the engineers of the military service, topographical and artillery officers and officers in the military and naval service, where science and extensive information and much talent were required, received no more than the Senate proposed to give these examiners of patents.

May 17, 1848.

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Report of committee on conference agreed to, yeas 92, nays 69 (salary of examiners $2500, assistants $1500).

May 18, 1848.

Senate.

On motion of Mr. Westcott the Senate took up the report of the committee of conference on the disagreeing vote of the two houses on the bill to provide additional examiners in the Patent Office and other purposes and agreed to the same.

Act approved May 27, 1848.

Note:—Patent office salaries, Commissioner's office and examiners:

1836, Commissioner, $3000; examiners, $1500. **1839**, assistant examiner, $1250. **1848**, Commissioner, $3000; examiners, $2500; assistant examiners, $1500. **1855**, Commissioner, $3000; examiners, $2500; first assist. examiners, $1800; second assistant examiners, $1500. **1870**, Commissioner, $4500; assistant commissioner, $3000; examiners in chief, $3000; examiners, $2500; first assistant examiners, $1800; second assistant examiners, $1600. **1875**, grade of third assistant examiner added, salary $1400. **1882**, grade of fourth assistant examiner added, salary $1200. **1884**, salary of Commissioner increased to $5000. **1908**, salary of Assistant Commissioner increased to $3500; examiners increased to $2700; first assistants, $2400; second assistants, $2100; third assistants, $1800; fourth assistants, $1500. **1909**, office of First Assistant Commissioner created, salary $4500; examiners in chief, $3500.

In 1848 the compensation of Senators and Representatives was $8.00 a day while Congress was in session and $8.00 for every 20 miles of travel to and from the Capital. The salary of the Chief Justice was $5000; of the Associate Justices, $4500. United States district judges received from $1000 (New Hampshire) to $3500 (Southern district of New York). Chief Justice Cranch of the District of Columbia received $2700 and $100 additional from the patent fund.

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THE PEACE TREATY.

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The following portions of the Treaty of Peace, substantially covering the disposition of industrial property rights, are deemed of sufficient interest to readers of this JOURNAL to warrant publication in full.

Editor.

Conditions of Peace.

The United States of America, the British Empire, France, Italy and Japan,

These Powers being described in the present treaty as the Principal Allied and Associated Powers,

Belgium, Bolivia, Brazil, China, Cuba, Ecuador, Greece, Guatemala, Haiti, the Hedjas, Honduras, Liberia, Nicaragua, Panama, Peru, Poland, Portugal, Roumania, the Serb-Croat and Slovene State, Siam, Tchecko-Slovakia and Uruguay,

These Powers constituting, with the Principal Powers mentioned above, the Allied and Associated Powers, of the one part;

And Germany, of the other part; * * *

Chapter V, General Articles,

Section II, Treaties,

Article 286.

The International Convention of Paris of the 20th March, 1883, for the protection of industrial property, revised at Washington on the 2nd June, 1911; the agreement of the 14th April, 1891, regarding the suppression of false indications of origin of goods; the agreement of the 14th April, 1891, concerning the international registration of trade-marks, and the International Convention of Berne of the 9th September, 1886, for the protection of literary and artistic works, revised at Berlin on the 13th November, 1908, and completed by the additional Protocol signed at Berne on the 20th March, 1914, will again come into effect as from the coming into force of the present Treaty, in so far as they are not affected or modified by the exceptions and restrictions resulting therefrom.

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Section IV, Property, Rights and Interests, Article 297 (b).

Subject to any contrary stipulations which may be provided for in the present Treaty, the Allied and Associated Powers reserve the right to retain and liquidate all property, rights and interests of German nationals, or companies controlled by them, within their territories, colonies, possessions and protectorates, including territories ceded to them by the present Treaty.

The liquidation shall be carried out in accordance with the laws of the Allied or Associated State concerned, and the German owner shall not be able to dispose of such property, rights or interests nor to subject them to any charge without the consent of that State.

German nationals who acquire *ipso facto* the nationality of an Allied or Associated Power in accordance with the provisions of the present Treaty will not be considered as German nationals within the meaning of this paragraph.

Article 297 (d).

As between the Allied and Associated Powers or their nationals on the one hand and Germany or her nationals on the other hand, all the exceptional war measures, or measures of transfer, or acts done or to be done in execution of such measures as defined in paragraphs 1 and 3 of the Annex hereto shall be considered as final and binding upon all persons except as regards the reservations laid down the present Treaty.

Annex 5 to Article 298, Sec. 4, Property, Rights and Industries.

Notwithstanding the provisions of Article 297, where immediately before the outbreak of war a company incorporated in an Allied or Associated State had rights in common with a company controlled by it and incorporated in Germany to the use of trade-marks in third countries, or enjoyed the use in common with such company of unique means of reproduction of goods or articles for sale in third countries, the former company shall alone have the right to use these trade-marks in third countries to the exclusion of the German company, and these unique means of reproduction shall be handed over to the former

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company, notwithstanding any action taken under German war legislation with regard to the latter company or its business, industrial property or shares. Nevertheless, the former company, if requested, shall deliver to the latter company derivative copies permitting the continuation of reproduction of articles for use within German territory.

Annex to Article 298 (15).

The provisions of Article 297 and this Annex apply to industrial, literary and artistic property which has been or will be dealt with in the liquidation of property, rights, interests, companies or businesses under war legislation by the Allied or Associated Powers, or in accordance with the stipulations of Article 297, paragraph (b).

Section V, Contracts, Prescriptions, Judgments, Article 303.

For the purpose of Sections III, IV, V and VII, the expression "during the war" means for each Allied or Associated Power the period between the state of war between that Power and Germany and the coming into force of the present Treaty.

Section VII, Industrial Property. Article 306.

Subject to the stipulations of the present Treaty, rights of industrial, literary and artistic property, as such property is defined by the International Conventions of Paris and of Berne, mentioned in Article 286, shall be re-established or restored, as from the coming into force of the present Treaty, in the territories of the High Contracting Parties, in favor of the persons entitled to the benefit of them at the moment when the state of war commenced or their legal representatives. Equally, rights which, except for the war, would have been acquired during the war in consequence of an application made for the protection of industrial property, or the publication of a literary or artistic work, shall be recognized and established in favor of those persons who would have been entitled thereto, from the coming into force of the present Treaty.

Nevertheless, all acts done by virtue of the special measures taken during the war under legislative, executive or administrative authority of any Allied or Associated Power in regard to the rights of German nationals in industrial, literary or artistic property shall remain

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in force and shall continue to maintain their full effect.

No claim shall be made or action brought by Germany or German nationals in respect of the use during the war by the Government of any Allied or Associated Power, or by any persons acting on behalf or with the assent of such Government, of any rights in industrial, literary or artistic property, nor in respect of the sale, offering for sale, or use of any products, articles or apparatus whatsoever to which such rights applied.

Unless the legislation of any one of the Allied or Associated Powers otherwise directs, sums due or paid in virtue of any act or operation resulting from the execution of the special measures mentioned in paragraph I of this article shall be dealt with in the same way as other sums due to German nationals are directed to be dealt with by the present Treaty; and sums produced by any special measures taken by the German Government in respect of rights in industrial, literary or artistic property belonging to the nationals of the Allied or Associated Powers shall be considered and treated in the same way as other debts due from German nationals.

Each of the Allied and Associated Powers reserves to itself the right to impose such limitations, conditions or restrictions on rights of industrial, literary or artistic property (with the exception of trade-marks) acquired before or during the war, or which may be subsequently acquired in accordance with its legislation, by German nationals, whether by granting licenses, or by the working, or by preserving control over their exploitation, or in any other way, as may be considered necessary for national defense, or in the public interest, or for assuring the fair treatment by Germany of the rights of industrial, literary and artistic property held in German territory by its nationals, or for securing due fulfilment of all the obligations undertaken by Germany in the present Treaty.

Each of the Allied or Associated Powers reserves the right to treat as void and of no effect any transfer in whole or in part of or other dealing with rights of or in respect of industrial, literary or artistic property effected after August 1, 1914, or in the future, which would have the result of defeating the objects of the provisions of this article.

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The provisions of this article shall not apply to rights in industrial, literary or artistic property which have been dealt with in the liquidation of businesses or companies under war legislation by the Allied or Associated Powers, or which may be so dealt with by virtue of Article 297, paragraph (b).

Article 307.

A minimum of one year after the coming into force of the present Treaty shall be accorded to the nationals of the High Contracting Parties, without extension fees or other penalty, in order to enable such persons to accomplish any act, fulfil any formality, pay any fees, and generally satisfy any obligation prescribed by the laws or regulations of the respective States relating to the obtaining, preserving or opposing rights to, or in respect of, industrial property either acquired before the 1st August, 1914, or which, except for the war, might have been acquired since that date as a result of an application made before the war or during its continuance, but nothing in this article shall give any right to reopen interference proceedings in the United States of America where a final hearing has taken place.

All rights in, or in respect of, such property which may have lapsed by reason of any failure to accomplish any act, fulfil any formality, or make any payment, shall revive, but subject in the case of patents and designs to the imposition of such conditions as each Allied or Associated Power may deem reasonably necessary for the protection of persons who have manufactured or made use of the subject-matter of such property while the rights had lapsed. Further, where rights to patents or designs belonging to German nationals are revived under this article they shall be subject to the same provisions as would have been applicable to them during the war, as well as to all the provisions of the present Treaty.

The period from the 1st August, 1914, until the coming into force of the present Treaty shall be excluded in considering the time within which a patent should be worked or a trade-mark or design used, and it is further agreed that no patent, registered trade-mark or design in force on the 1st August, 1914, shall be subject to revocation or cancellation by reason only of the failure to work such

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patent or use such trade-mark or design for two years after the coming into force of the present Treaty.

Article 308.

The rights of priority, provided by Article IV of the International Convention for the Protection of Industrial Property of Paris, of the 20th March, 1883, revised at Washington in 1911 or by any other Convention or Statute, for the filing or registration of applications for patents or models of utility, and for the registration of trade-marks, designs and models which had not expired on the 1st August, 1914, and those which have arisen during the war, or would have arisen but for the war, shall be extended by each of the High Contracting Parties in favor of all nationals of the other High Contracting Parties for a period of six months after the coming into force of the present Treaty.

Nevertheless, such extension shall in no way affect the right of any of the High Contracting Parties or of any person who before the coming into force of the present Treaty was *bona fide* in possession of any rights of industrial property conflicting with rights applied for by another who claims rights of priority in respect of them, to exercise such rights by itself or himself personally, or by such agents or licensees as derived their rights from it or him before the coming into force of the present Treaty; and such persons shall not be amenable to any action or other process of law in respect of infringement.

Article 309.

No action shall be brought and no claim made by persons residing or carrying on business within the territories of Germany on the one part and of the Allied or Associated Powers on the other, or persons who are nationals of such Powers respectively, or by any one deriving title during the war from such persons, by reason of any action which has taken place within the territory of the other party between the date of the declaration of war and that of the coming into force of the present Treaty, which might constitute an infringement of the rights of industrial property or rights of literary and artistic property, either existing at any time during the war or revived under the provisions of Articles 307 and 308.

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Equally, no action for infringement of industrial, literary or artistic property rights by such persons shall at any time be permissible in respect of the sale or offering for sale for a period of one year after the signature of the present Treaty in the territories of the Allied or Associated Powers on the one hand or Germany on the other, of products or articles manufactured, or of literary or artistic works published, during the period between the declaration of war and the signature of the present Treaty, or against those who have acquired and continue to use them. It is understood, nevertheless, that this provision shall not apply when the possessor of the rights was domiciled or had an industrial or commercial establishment in the districts occupied by Germany during the war.

This article shall not apply as between the United States of America on the one hand and Germany on the other.

Article 310.

Licenses in respect of industrial, literary or artistic property concluded before the war between nationals of the Allied or Associated Powers or persons residing in their territory or carrying on business therein, on the one part, and German nationals, on the other part, shall be considered as canceled as from the date of the declaration of war between Germany and the Allied or Associated Powers. But, in any case, the former beneficiary of a contract of this kind shall have the right, within a period of six months after the coming into force of the present Treaty, to demand from the proprietor of the rights the grant of a new license, the conditions of which, in default of agreement between the parties, shall be fixed by the duly qualified tribunal in the country under whose legislation the rights had been acquired, except in the case of licenses held in respect of rights acquired under German law. In such cases the conditions shall be fixed by the Mixed Arbitral Tribunal referred to in Section VI of this part. The Tribunal may, if necessary, fix also the amount which it may deem just should be paid by reason of the use of the rights during the war.

No license in respect of industrial, literary or artistic property, granted under the special war legislation of

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any Allied or Associated Power, shall be affected by the continued existence of any license entered into before the war, but shall remain valid and of full effect, and a license so granted to the former beneficiary of a license entered into before the war shall be considered as substituted for such license.

Where sums have been paid during the war by virtue of a license or agreement concluded before the war in respect of rights of industrial property or for the reproduction or the representation of literary, dramatic or artistic works, these sums shall be dealt with in the same manner as other debts or credits of German nationals, as provided by the present Treaty.

This article shall not apply as between the United States of America on the one hand and Germany on the other.

Article 311.

The inhabitants of territories separated from Germany by virtue of the present Treaty shall, notwithstanding this separation and the change of nationality consequent thereon, continue to enjoy in Germany all the rights in industrial, literary and artistic property to which they were entitled under German legislation at the time of the separaton.

Part XV, Miscellaneous Provisions,
Article 440.

A first proces-verbal of the deposit of ratifications will be drawn up as soon as the Treaty has been ratified by Germany on the one hand, and by three of the Principal Allied and Associated Powers on the other hand.

From the date of this first proces-verbal the Treaty will come into force between the High Contracting Parties who have ratified it. For the determination of all periods of time provided for in the present Treaty this date will be the date of the coming into force of the Treaty.

In all other respects the Treaty will enter into force for each Power at the date of the deposit of its ratification.

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CAN DIVISION PRACTICE BE MADE LESS COMPLICATED AND EXPENSIVE?

By ARTHUR W. COWLES, Examiner.

This paper is suggestive only and is written with the idea that it may initiate or stimulate discussion as to most desirable division practice.

The subject is certainly a surprisingly confused and confusing one. It appears superficially to be as simple as the word "Division," but even a brief study of it discloses a good deal of apparent or real complexity. It has the innocent appearance of a live wire under high voltage; and an attempt to handle it ordinarily results in contortions, and a disposition to let go, the single definite conclusion being that you didn't know it was loaded. This paper will show how uncertain are the writer's ideas about division, although he has used the term unhesitatingly for years.

But at any rate, if requirements for division are fundamentally proper, there must be some fundamental reason or reasons for the propriety, and if it can be definitely determined what the precise grounds for division are or ought to be, there may be established a correct foundation on which to erect some logical and definite structure agreed upon by the different divisions and approved by the higher Office authorities, and which may be looked to in case of doubt; and whenever equity advises a modification of technical practice, we may know more certainly why there should be modification, and how far it should go. A natural result would be more uniformity of practice, with a resultant advantage to applicants, to the public and to the Office.

The patent statutes have not contained the word "division." Division practice appears to be based on the implication of the statute that each invention should be protected in a separate patent; that the law has never contemplated that one patent should protect two or more inventions.

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Robinson has treated this question in his usually exhaustive way under the title, Joinder of Inventions, in Vol, 2, Sections 468 to 479.

It appears from Robinson's discussion that division was a natural result of the institution of a search system, i. e., a system of examination of certain material to determine whether a claimed invention avoids known art; because the search system necessarily requires a specific and reasonably minute distribution of the material to be searched. This distribution is, of course, most easily and effectually made by following the actual developments in those arts and instruments that are the subject of patents and patent applications, and separating the resulting art into appropriate classes.

Such a distribution of the search material having been made, it was natural to sometimes consider the propriety of requiring division of material while the material was in an application, in order to provide separate application papers to be sent to those in charge of the respective fields of search, and to anticipate the ultimate patent classification of the material which the searches might find to be patentable.

The direct legal basis for the requirement was apparently, as has been stated, the implication that the United States patent law contemplates broadly that a separate patent shall issue for each patentable invention, and the deduction, in view of the distinct fields of search necessary to be investigated to determine patentability of the various inventions in the application, that the statute could not be as loosely construed as before the search system was established.

But, on the other hand, it has been recognized that the constitutional provision on which the patent statutes have all been based implies clearly that the exclusive rights shall be given to inventors for the encouragement of invention. Robinson shows that before the law of 1836 very different inventions were allowed protection in a single patent, in order to encourage invention.

Of course, the same purpose, the encouragement of invention, underlies the later statutes. One means of encouragement is a reasonable minimum expense to the inventor; and in actual practice each additional applica-

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tion means additional Office fees and usually additional attorney's fees. Perhaps for this reason, even after a search system had been established, where cursory inspection of an application showed that the fields of search for art as to the respective inventions claimed in the application were the same, or overlapped a good deal, or were not widely different, it was thought a hardship on the inventor to compel him to pay for one or more additional applications. Thus apparently the waiver of the strict construction of the statute of 1836 was carried over to the later statues, and division became a question of fact and not of law.

The question has been further and decidedly complicated by the fact that although one or more inventions may be separately patentable they may be so interrelated that the grant of separate patents for the respective inventions would be Double Patenting, and Double Patenting is to be guarded against more than the joinder of inventions, because it rests on a fundamental deeper than the fundamental that separate inventions should be protected in separate patents; namely, that the Patent Law intends every patent to be patentably distinct from every other patent regardless of the copendency of inventions or the identity of applicants. For this reason the Office and the courts allow joinder of inventions if Double Patenting would result from the separation in patents, the courts very seldom criticising the joinder of inventions, but very frequently declaring patents invalid for Double Patenting.

And Double Patenting results, whenever separate patents are granted for a thing conceived and for a second thing which it was necessary that the inventor should conceive and reduce in order to produce the thing first conceived, and only one such second thing exists, or whenever two or more things conceived and produced are what is known in patent language as equivalent; i. e., a plurality of equivalent species embodying a single genus. This condition need not be elaborated here, because it was discussed in a paper published among the Patent Office papers, and entitled "A Phase of Double Patenting."

Thus we have the fundamental, that under strict construction of the patent statute each invention should be

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protected in a separate patent, and the fact that the necessary classification of search material may require separate searches on separate inventions; the more important fundamental, that Double Patenting must not occur; and the most important fundamental, that invention must be encouraged as far as is consistent with the grant of valid patents and with the most efficient condition of the Office.

Due to this variety of fundamentals and perhaps to others here overlooked, the line between division and nondivision has never been wholly definite either as to location or shape. The line is now so hazy in both these particulars that the services of an expert law examiner are required to reconcile the differences between applicants and the Office.

At the risk of monotony in repeating what has been said in various ways in previous Office papers concerned with division, it may be well to indicate briefly the different forms under which a plurality of inventions may be claimed in a single application.

A single application may present a plurality of inventions in the same statutory class or in different statutory classes.

Such inventions in the same statutory class may be: 1: one or more organization products and one or more subcombination products. 2: one or more organization products and one or more element products. 3: a combination of 1 and 2. Since every product is only an instrument, every so-called "apparatus" considered as a product falls under these classes. 4: one or more processes and one or more subcombination processes. 5: one or more processes and one or more single process steps. 6: the combination of 4 and 5. 7: one or more products or processes embodying a generic idea or ideas and two or more specific embodiments of the idea. This is the familiar genus and species condition.

When the respective inventions presented in a single application are in different statutory classes they may be, 1: one or more products and one or more processes or parts of processes for making the product or products. 2: One or more processes and one or more forms of apparatus or parts of apparatus for performing the processes. 3: combinations of 1 and 2. Also, of course, one

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application may present inventions in the same statutory class as well as inventions in different statutory classes taken from the classes just enumerated.

These various inventions and subinventions seem to have their origin and their appearance in a single application in the following way:

A product is a thing produced by a process; a process is a step or series of steps performed on material to produce a product; and a process is performed by apparatus, animal or mechanical, or both; an apparatus is means for performing a process.

Assume that an inventor has conceived a product. This conception is of no use to the world until it is embodied as an instrument capable of predetermined use under predetermined conditions. In patent language this embodiment of the conceived thing is of course known as the "reduction to practice" of the conception. The process of making this product is always a step or steps performed on certain material by certain apparatus. Therefore the existence of the product as a thing embodied depends upon the existence and availability of the proper process and the proper apparatus.

In practice these processes and forms of apparatus ordinarily exist at the time of the conception of the conception of the product, so that the product can be produced by those skilled in the art concerned. It follows from this condition that if the conceiver of the product wants a patent for the product, his application need not describe the process of making the product or the apparatus needed to perform the process. By far the greatest number of patent applications are of this sort. The ordinary application discloses and claims a product which needs only conception on the part of the inventor. The production of it by mechanical skill, i. e., by the skill of those acquainted with the art, is so obvious that usually neither the necessary process nor the necessary apparatus is referred to.

But suppose the required process is apparently not available. Obviously under such a condition the primary conception, i. e., the conception of the product, is not sufficient. There must be a second or subconception, that of the process for making the product. But there must be a reduction to practice of this subconception.

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else the process itself does not become available, and the product is still unmakable. Ordinarily, again, the process having been so conceived, the necessary apparatus is available, and inasmuch as the process can thus be reduced to practice by mechanical skill, the product can be produced, and so made available to the public.

But it may further happen that the inventor, having conceived a product, and knowing of no available process, may conceive the necessary process and yet find no apparatus available for reducing the process to practice. Obviously the inventor is then confronted with the necessity of conceiving and reducing to practice the necessary apparatus. Having performed that act the necessary apparatus becomes available, its application to the conceived process makes the necessary process available, and the application of the process to the conceived product produces that product. Thus the product which was the primary conception becomes available to the public.

This condition is of course unusual, but it is by no means fanciful. One might conceive of a new rail for car tracks, based on a discovery that a superior rail would probably be produced if a certain specific molecular condition could be brought about in the manufacture of the rail. The conception of the product would be clear. But possibly no complete process for reducing to practice this conception, i. e., for making the conceived rail, would be available. There must be a subconception, that of all or a part of the process for so manipulating the ingot as to produce the rail. But again there might be no complete apparatus available for performing the conceived process, such apparatus being naturally powerful machinery; and all or a part of such proper apparatus must first be conceived and reduced. So that to make the product available to the public, there must be a primary conception, a second conception and a third conception, and a reduction to practice of the third conception.

Since a patent is granted only for a thing made available to the public, if such an inventor wants a patent, his application must disclose not only the rail, but the process of making the rail and the apparatus for performing the process. Only so does he satisfy the statutory requirement to describe the process of making the product in such full, clear, concise and exact terms as to enable one skilled in the art to produce it.

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Or it may happen that a product being old, an inventor conceives of a new process by which the old product may be made more economically and may know of no apparatus to perform the process. We may imagine an old form of steel rail made by a certain process, and that the inventor conceives of a new process of manipulating the ingot so as to produce the same rail in onehalf the known time. Again this conceived process is without value unless reduced to practice, and the inventor may have to conceive and reduce all or a part of the apparatus capable of performing the process. Only so can he benefit the public or receive a patent.

Also, there is a kind of product which can be called a product only if that term is used in a broad sense, perhaps broader than in the patent sense. A process is, as has been seen, a series of steps performed on material to produce a product. The physical embodiment of this product may be anything which results from a process. One example is a street improved by a cleaning process. Such a street is a product, even if a temporary one, and regardless of whether it comes within the term "product" as used in the Patent Law. It is a part of apparatus used in street transportation.

Suppose an inventor conceives a method of cleaning a street so as to produce this new product. There may be no apparatus available to perform the process, i. e., to reduce the process to practice, the known apparatus being inadequate to perform it.

The apparatus ordinarily used in street cleaning is a cart on which are mounted a water-tank, a pump, and supply pipes and nozzles to convey the water from the tank to the street surface. It might easily happen that the inventor could only produce apparatus efficient to apply the water in the way conceived, by conceiving and reducing a new form of tank, a new form of cart-body to support the new tank, a new form of pump, a new form of distributing pipes, and a new form of nozzle, all cooperating to perform the newly conceived process.

Or, it might happen that the specific product, that particular form of cleaned street, is old, and the primary conception may be now of a new process which will produce the same cleaned street at less expense of time and

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water, and the same problem of reduction to practice of the process as above stated might present itself. Or the cleaned street and the process might be old, and the primary conception might be of improved apparatus for performing the old process with a less expenditure of energy, the problem then being the reduction to practice of the conceived apparatus.

Thus we may have as a primary conception a product, and as necessary to reduce this primary conception to practice, the subconception of a process to be made available, and a second subconception, that of apparatus available to perform the process and so reduce the process to practice, and this second subconception, that of the apparatus, may need reduction to practice. If such apparatus is produced, the process is reduced to practice and is available to produce the conceived product, and the apparatus is available to perform the process necessary to produce the primary product.

Or we may have an old product and as a primary conception a new process for producing the product, and the same necessity of reducing this process to practice by conceiving and reducing to practice the conceived apparatus. As to conception and reduction this new apparatus is itself a product, and may in turn require subconceptions and reductions.

Or we may have an old process, and a conceived apparatus to lessen the cost of performing the process, some or all of the constituent parts of the conceived apparatus needing reduction to practice.

Of course, the inventions which have the relation of genus and species fall directly in line with these conditions, the genus being a product, a process, or an apparatus resulting from a primary conception or a subconception, and being reduced to practice, i. e., embodied, in one or more species.

Now, although these subconceptions and reductions are created only to reduce to practice some primary conception, when the things resulting from these subconceptions and reductions have been produced, they are as truly means available to the public as if each of them were the embodiment of a primary conception. The process of making the steel rail referred to above, the apparatus for performing that process, the process of cleaning

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the street referred to, the apparatus for performing that process, and the tank, cart-body, pump, distributing pipes and nozzles invented to produce the sprinkling apparatus; each of these is means as truly as is the steel rail or the cleaned street.

The inventor, recognizing this availability, may see that the process or the apparatus which he created to produce his rail may operate on some other material and produce some other article, a roof-girder, for example. The process and apparatus created to produce a particular type of cleaned street may be perhaps useful in spreading a liquid fertilizer.

The tank, pump, cart-body, pipes and nozzles created to produce a street-sprinkler may be capable of use individually in many other coöperative relations.

It may indeed easily happen that the inventor will instantly recognize that one of the instruments produced by a subconception and reduction is a good deal more valuable commercially than the instrument which was the object of the primary conception.

Given this condition, an inventor looking for patent protection may conclude to protect these embodiments of his inventive activity in addition to the embodiment of his primary conception.

And the evolution of these subinventions in the mind of the inventor naturally leads him to see, perhaps to emphasize, an intimacy of relation between them and the primary invention, and between themselves; i. e., a dependence of the primary invention upon the specific subinventions; of the subinventions upon each other; or a dependence of the subinventions upon some or all of its specific constituent parts.

The natural result of this condition is the presentation of claims to the primary invention and to the subinventions all in a single application; and the Office has before it the problem of deciding how many of these inventions, in justice to the inventor, to the public and to the Office, should be given a full examination in the application which presents them, and how many should be presented in separate applications; and a problem in division results.

A patent claim, if allowed, theoretically protects the invention defined by it as to all the uses of that inven-

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tion. When separate claims are made to separate inventions, each claim, if found patentable, is intended to give the inventor the same monopoly and rights whether the claims are presented in the same application or in different applications. It follows from this condition that the search must be as exhaustive in one case as in the other. Whether ten claims are presented in one application or in any number of applications up to ten, the Office duty toward each claim which it accepts for a complete search is the same.

As has been said above, the total field of search for one given plurality of inventions may vary in area very much from the total field of search on some other plurality of inventions. Or total field may be made up of fields of search which overlap a good deal, or are even substantially the same, so that, in a search as to the patentability of one of the inventions, the art to one, or more, of the others may come to light, with the result that the presumable number of searches which make up the total search may be small. On the other hand, the total field of search may be made up of fields so widely distinct in their relation to the arts that a search on all the claimed inventions can be made only by making wholly separate searches, the art which comes to light from the search on one invention furnishing no information as to the patentability of another.

As has been stated earlier, when the respective fields of search for the separate inventions claimed have been the same, or nearly the same, or even have not been quite different, the equity demanded by the importance of encouraging invention has often led the Office to waive the strict construction of the implication of the Patent Law that each invention should have a patent of its own, and thus the Office frequently makes searches as to the patentability of a plurality of inventions presented in a single application without requiring division.

Such closely related and overlapping fields exist in any classification based on the development of the arts, when a plurality of inventions in a given art have not been developed industrially to such a degree as to be separately made and sold for use with standard things.

The liberal construction of the statute encourages invention by lessening the expense to the applicant, since

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each additional application required means additional Office fees, and ordinarily additional attorney's fees.

The fact that the waiver of the strict construction of the law is already in practice in various forms is of importance in the consideration of change in division practice.

It is possible that the "first" or so-called "preliminary" fee of fifteen dollars should have more consideration in division practice than is usually given to it.

This "preliminary" fifteen-dollar fee is necessary to the completion of every application for a mechanical patent, that is, every application presented under 4886. No examination will be given as to the patentability of invention claimed in such an application, although the application may be complete in every other way, unless this preliminary fee has been paid. The final fee of twenty dollars need not be paid until after patentability has been assured and not then unless applicant chooses to take out his patent.

On the other hand, if the preliminary fee has been paid, many other formalities are waived pending the determination of patentability of the claimed invention, and the same full search is made on patentability as if all other parts of the application complied fully with the statute and the rules, the apparent idea again being to lessen to the applicant the expense of learning whether his invention is patentable. May not the preliminary fee have been made less than the final fee for the same reason, the larger fee being demanded only after the invention has been found patentable?

Further, if the search which the statute directs shows that the invention is not patentable the statute makes no provision for the return of the preliminary fee. If search determines that the invention is patentable and the applicant then abandons his application or invention by action or by direct statement, there is still no provision for the return of that fee. Indeed, after the complete application has been filed, and even before any examination has been made, there is, ordinarily, no provision for returning this fee; the Office apparently contracting to determine the patentability of the claimed invention.

Occasionally also two applications are filed by the same applicant which applications claim respective inventions

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so vitally related that Double Patenting would result from the issue of separate patents, as for example, when the respective inventions claimed are a product and a process. Under this condition merger of the two applications into one application on which one patent shall issue is required. Only one final fee is required, but there is no provision for the return of the extra preliminary fee inadvertently paid. A search has been made on the patentability of each invention, which search has been as complete as to the patentability of each invention as if the other invention had not been claimed.

In view of these conditions would it be illegal or illogical, or in any way unjust to the applicant, to the public or to the Office, to consider this preliminary fee of fifteen dollars as a true "search" fee? If it may be properly so considered, the problem of division is apparently of relatively easy solution.

Because every invention is a different *thing* from every other invention. A product invention is not a process invention, a process invention is not an apparatus invention. An organization product invention is a different thing from every other invention having more or less parts. Elaborating this difference as to organization products, because it is by far the commonest condition arising in division practice, the organization a b c d is not the same thing as a, or b, or ab, or abc, or bcd, or abcde. It is not the same thing as any other thing. It is not the same thing as a thing having more or less parts.

On the other hand, a product, a process, an apparatus, an organization, a subcombination, an element—each of these things remains the same thing no matter how broadly or narrowly it may be claimed, whether as "means," or most specifically. Just as a given suit of clothes remains the same thing whether the coat, vest, trousers and shoes are recited in broad element and combination form, or whether the specific shape and color of each member and its specific coöperative relation to another member is recited. If the vest is taken from the combination the remaining parts are a different combination. If a hat is added to the suit there is again a different combination. However vital the relationship that may exist between the different things, between the prod-

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uct and a process, a process and an apparatus, and so on, the fact that they are different things is not changed.

And, of course, division is required between things; not between claims as embodiments of language, but between the disclosed things on which the claims are based. The expressed requirement between claims is only a convenient manner of identifying the respective things. And division practice based on relative breadth of claims drawn on the same disclosed embodiment could not be sound. This fact is transparent in the case of a single species disclosed alone in an application and on which generic and specific claims are drawn. In such a case the Office not only does not require division, but will not allow it. But every product, process, apparatus, subcombination or element is just such a species. Merely because it is disclosed with various other species and in cooperation with them does not change its *per se* identity or its capacity to form a basis for generic and specific claims.

Thus, when claims are presented, respectively, to a product and a process; to a product and an apparatus; to a process and an apparatus; to an organization, as abcd, a subcombination ab, and an element a; the only question under the suggested practice would be: do the disclosed things on which the respective claims or sets of claims are based belong to types of things which are placed in respective fields of search so different that division should be required?

Given a plurality of inventions claimed in a single application, no matter whether these inventions are in different statutory classes or in the same statutory class, certain conditions are clearly definite. First, they are different things. Second, a search made to determine the patentability of each of the inventions must be exhaustive; theoretically at least it must be just as complete as if no other invention were claimed.

Third, the total search field may be made up of entirely separate fields, or fields overlapping a little, or of fields overlapping a good deal, or of fields overlapping entirely, i. e., precisely the same.

The first two conditions are fixed. Only the third condition, the make-up of the total field of search, is a variable condition. But this variable condition is wholly vis-

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ible. It depends wholly on the distribution of the particular search material in the Office; that is, on classification.

Regardless of the accuracy or sufficiency or availability of any system of classification, theoretically it is that disposition of search material which the Office believes will allow an exhaustive search in a minimum of time.

If the preliminary fee of fifteen dollars may be properly regarded as a search fee, the question whether a plurality of inventions claimed in a single application should be searched in that application, only one search fee having been paid; or whether a plurality of fees should be paid, each fee being accompanied by the other appropriate parts of an application, would be determined by the simple procedure of determining whether the various fields of search which make up a given total field are presumptively so nearly the same that division need not be required, or are presumptively so different that one or more divisions should be required. An inspection of the Office classification would determine this.

Of course, there could be the usual cursory search in each class, and if it were reasonably certain that the field of search for one type was sufficiently limited, division as to that type could be waived.

Such a variation from the established practice would not seem to be radical. Under our present system equity often allows the presentation and examination in a single application of claims to respectively different things if the respective fields of search are the same, or partly overlie one another, or approach one another sufficiently; the strict construction of the general implication of the statute that every invention should be protected in a separate patent yielding to the specific constitutional implication that invention should be encouraged.

Further, the present division practice as to all but "species" claims operates broadly by the test as to whether when a thing has been conceived, and the conception cannot be reduced to practice until a second thing has been conceived and reduced in order to serve as a means for reducing the first conception, the second thing so conceived and reduced belongs to a known type of things used to coöperate with other known things. That is, when a product and the process of making that product

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are separately claimed in one application, the requirement for division is dependent largely on whether the process which was conceived and reduced in order to reduce to practice the conception of the product, belongs to a known type of processes used to make known products; or when a product and the apparatus for making the product are separately claimed in a single application, whether the apparatus conceived and reduced in order to reduce the conception of the product belongs to a known type of apparatus used to make known products. The same test holds as to process and apparatus, and as to an organization product, or organization process and a subcombination or element which forms a part of the organization. This last condition, an organization product or process, as A B C D, and a subcombination or element of the organization, as AB or A, is probably the commonest in division practice.

But when such known types do exist they, of course, exist because a certain industry or industries have developed sufficiently to produce the collections of members which form the types concerned. And as every patent classification is naturally based on and, theoretically at least, follows the industrial development, such separate types naturally gather in separate fields of search.

So that the present division practice is very largely based on whether the respective fields of search are separate. To go further and to make the test wholly dependent on the respective fields of search is apparently only an extension of the present practice, is apparently legal, and may be logical.

This change, however, would probably alter considerably the present practice as to the requirement of division between a plurality of species which embody the same genus. Perhaps such requirement for search purposes would cease. Such species are usually so intimately related to each other by nature that they would seldom, perhaps never, belong to types so distinct as to lie in separate fields of search. Indeed, usually, perhaps uniformly, the fields of search would be substantially the same, if not exactly so. But it may be said: "A plurality of such species must inherently be such distinct inventions that one patent could not validly be granted for them. They do not coöperate in any sense, but are substi-

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tutes for one another." Their distinctness is clear, and perhaps if the complete search should show that each species is patentable, and is patentably distinct from every other species claimed, plus known art, so that Double Patenting would not occur through separate patents, the applicant could then be required to file separate papers, including a fee, for each of the species except that one chosen to be claimed in the original application. But by this procedure the applicant would know that as advised a patent would issue on each application. This would be much cheaper to the applicant than to insist on division prior to the search, since the applicant might thus avoid the expense of filing and prosecuting additional applications for unpatentable matter.

Further, this suggested modification introduces the interesting and apparently sometimes serious question as to what practice would be the most just when two or more species separately claimed in one application prove, on complete search, to avoid known art, but not to be patentably distinct from one another.

Such a condition produced *ex parte* Isherwood, 231 O. G., page 1211, in which the Commissioner stated that division was properly required between two species separately claimed, such practice, of course, being based on the well-known *ex parte* Eagle, C. D., 1870, page 137; and that the subsequent rejection of a claim to the species so divided on the patent granted for the generic idea and for the species retained in the original case, was also proper. For certain commercial reasons the prosecution of the divided species was carried to the Court of Appeals of the District of Columbia, where the divided application was again rejected.

It may be added that the generic invention involves the shipbuilding art, and its principle is considered so valuable that the statement was recently made that it has been adopted by some ship construction authorities of the United States. Under the practice suggested above division would probably, perhaps certainly, not have been required, since presumably the respective fields of search involving the two species would be identical, or nearly so. The species would each have been found to avoid known art, but not to avoid each other plus known art. Would Isherwood then be told that he could have a spe-

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cific claim to one species only, or could the Office properly allow in the same patent separate claims to these distinct species? Apparently under the practice established, or crystallized by *ex parte* Eagle, the Office could not allow such separate claims in the same patent; *ex parte* Isherwood also implies against allowing such claims in one patent.

But we have seen that equity very frequently prevails over a strict construction of the statute implication of a separate patent for each invention, and allows one patent to claim separately a plurality of inventions. And often, perhaps usually, the respective claims are not patentably distinct. It is true that in many such instances the various inventions separately claimed are not substitutes for one another as in the species conditions; but, on the other hand, these inventions do not coöperate to produce another thing. For instance, a product does not coöperate with the process of making the product to produce a third thing; and often the product and process as claimed are not patentably distinct. The respective claims are allowed and are valid in one patent when they would not be valid in separate patents. So an invention AB does not coöperate with ABC or with ABCD to produce a third thing; and separate patents to the respective inventions would often be invalid. It is true, of course, as stated in *ex parte* Isherwood above, that the generic claim allowed protects all species under it; but the product claims protect it as to all processes for making it; a claim AB allows dominance over ABC and ABCD. Also a claim to a genus embodied in a single species only assuredly protects against infringement of that species, since making, using or selling the species necessarily infringes the generic claim; yet the Office uniformly allows a claim to the species in addition to the generic claim. This last condition, allowance of genus and species claims, may be based on a perhaps subconscious recognition of the fact that a genus is an intangible thing and a claim should be allowed to its tangible embodiment, but the fact of complete protection by the generic claims is not altered.

Related to the Isherwood condition is the following condition which occurred recently, and which is probably common: An inventor had a plurality of copending applications, each for a separate species. No generic claim

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was allowable, but the various species each avoided known art. A patent was granted for one of the species, and an application for another species was rejected on that patent plus known art. This action was legally sound. But another party, noting the value of the species in the patent and wanting to avoid infringement, devised and used another species. This latter species was that under rejection. Now the inventor in question had originated the infringed species, it was patentable *per se,* and a patent would have been granted for it excepting for the patented species. It might be that the infringed species would prove more valuable commercially than the patented species. Yet in a suit for infringement the inventor must prove that the patented species was the equivalent *per se* of the infringed species. The inventor had not Isherwood's recourse to a generic claim.

Why should not the practice already established, of allowing unpatentably distinct claims to appear in the same patent be extended to unpatentably distinct species? The same patent is now very properly allowed to protect a product claim and a process claim, a product claim and and apparatus claim, a process claim and an apparatus claim, an organization claim and a subcombination or element claim, because the embodiment on which each claim is drawn is the basis of a specific monopoly different from the specific monopoly of the other embodiment; so that the inventor may sue on specific infringements, on infringement of each monopoly *per se.*

To include within this established practice unpatentably distinct species would apparently be wholly within the generic idea of this type of protection. And invention would be further encouraged by this additional protection given to the inventor.

It might be said that inventors could abuse this privilege by disclosing and claiming a good many unpatentably distinct species in the same application. But this abuse, like the abuse of too many claims in one application and other abuses, can easily be held in check by applying a strict construction to the letter of the law when necessary.

Of course, *ex parte* Eagle, above referred to, would need modification.

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Also, practice so far suggested would require change of the language of Rule 41. "Several distinct inventions which are dependent on each other and mutually contribute to produce a single result," might belong to types of things in widely different fields of search.

But it may be said that it would be a hardship to the inventor to require division between a plurality of inventions merely because of the widely different fields of search necessary to be investigated, when the respective inventions might appear in advance to be so vitally related that only one patent could properly be granted for all of them, as a product and a process, a product and an apparatus, a process and apparatus, an organization and a subcombination or element of that organization; or when the search might disclose that intimate relation, so that after the expense of dividing the applicant would be required to remerge the inventions. But this hardship would apparently occur but seldom and might be overbalanced by the greater general benefit to applicants. Even under present practice when separate applications are filed originally and this vital conflict is found to exist, as, e. g., between a product and a process, merger is required. And even this relatively rare hardship might be avoided, and other advantages important to the applicant might follow if the following suggestion could advisedly be adopted, though it may seem rather radical.

It happens only too often that after one or more additional applications are filed for the matter "divided out" of the original application in response to a requirement of division, a complete search on all the inventions shows one or more of them to be unpatentable; and the expense to the applicant of filing additional applications and prosecuting them, the latter expense being often greater than the expense of filing, is partly or wholly without return to the applicant in the form of a patent.

Of course, it is true that when the divided matter is found on examination to be unpatentable, the dividing applicant merely meets the fate of an original applicant whose application is found on examination to be unpatentable; the Office has given in each case the customary search due to every complete application, and division was required only because the dividing applicant claimed more than one invention in a single application. But

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the expense involved in the preparation of the papers and the subsequent prosecution of a divisional application, like the expense of an original application, is often much greater than the preliminary fee of fifteen dollars which accompanies the papers, that fee being only a small part of the total cost. Very many inventors, it is to be feared, have difficulty in meeting the cost of filing and prosecuting the original application. The cost of additional applications might easily be prohibitory. If any expedient which would be legal, and would be just to the inventor, to the public and to the Office, could dispense with the preliminary cost of additional papers in divisional cases, invention would be encouraged. And encouragement of invention is the reason for the Patent Law.

The original application, the application which discloses the total subject-matter, from which the divisional matter is taken if a requirement for division is followed by the filing of a divisional application or applications, is often called the "parent" application. This "parent" application, if properly prepared, contains the usual petition, description, claims and oath, and each of these parts is completely inclusive of all the matter. The petition is a petition to grant a patent on all of the disclosed and claimed matter, for the matter "set forth in the annexed specification"; the description is a description of all the inventions to be claimed; the claims as a whole claim all the inventions on which a patent is desired; and the oath makes each of its assertions as to all the inventions "described and claimed in the annexed specification."

An application properly divided from the parent case and confined to the divided matter has only matter which, as was felicitously stated in *ex parte* Henry, 64 O. G., page 299, is "carved out of the parent case." The divisional application or applications add nothing to the disclosure. They merely repeat in separate papers parts of the original application, so that the respective divisional applications may go to those in charge of the respective fields of search involved in the divided matter, and so that such papers as disclose matter ultimately decided to be patentable may be used in the preparation of the appropriate patent or patents.

If the preliminary fee of fifteen dollars may properly be called a "search fee," would it be illegal, or unjust to

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the public, or to the Office, to allow an applicant to whom a requirement of division had been made to merely pay an additional search fee or fees of fifteen dollars each, the Office then making the additional search or searches with the original papers? The parent application could then be considered as two or more applications, the additional fee or fees could be applied to the original application, which could retain its original serial number, repeating that number with an added appropriate fraction or other sign. Application 200,162 would then have additional serial numbers 200,162½, 200,162¾, etc. Usually the respective fields of search are in different divisions, and the application would have to be transferred between the divisions concerned with the searches as amendment and other condition required. But would this be really a hardship to the examiner, or really inexpedient? And would not the possible inconvenience be much overbalanced by the benefit to inventors?

Each examiner would be just as free to act on the subject-matter under his jurisdiction as if it were in a separate application; his decision both as to matters of form and merits could be just as full and independent. When all the matters relating to the case as a whole had been settled the examiner who required division could then resume charge of the application, and decide whether justice to the inventor, to the public and to the Office would be best served by issuing all the patentable matter in one patent or in a plurality of patents. If the latter procedure seemed best, the applicant could then be required to furnish the additional application or applications, except of course as to the preliminary fee, which had already been paid. The applicant would know at the time of this requirement that, as advised, a patent would issue on each application.

If Double Patenting would result from the separation of the allowed invention, of course only one patent could issue and applicant would have been saved the expense of having furnished additional papers only to have them remerged in the parent case, as was mentioned earlier herein.

Apparently the machinery of the Office need not be much disturbed by such procedure. Of course, as just stated, the single application would have to be transferred

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to the different divisions of the Office having the respective fields of search if those fields were in different divisions. The work of examination would probably be facilitated if the respective amendments were made on separate papers.

If this general procedure sounds a little too complicated it is believed that it would not prove so in practice. It actually involves hardly more than the physical transfer of the file from one division to another as required. The bookkeeping would, of course, be a little more complex, but it is understood that the clerical work in the examining divisions exists to facilitate examining work.

Perhaps the Office fees would diminish somewhat. There would probably be fewer requirements for division, but probably a larger proportion of disputed requirements would be sustained, since the debatable line would be narrower and clearer. It is assumed, too, that it is not an object of the Office to demand fees unneccessary to its efficient work.

Radical as may seem the suggestion to dispense with new papers when division is required, it is believed to be doubtful whether any modification other than of the Rules is necessary. Very wide discretion appears to be allowed to the Commissioner in the making of Rules which tend to lessen the expense to the applicant. For example, the law says as to renewals, Sec. 4897, that "any person," etc., "shall have a right to make an application for a patent for such invention or discovery the same as in the case of an original application." But Secs. 4888 to 4892 say that an original application shall have a petition, specification, drawing, if necessary, and oath. To prepare and file these papers would involve expense. Therefore Rule 176, based on Sec. 4897, says: "In a renewal the oath, petition, specification, drawing and model of the original application may be used; but a new fee will be required." That is, the same papers are allowed to form two different applications complete, except as to the fee. Also, Rule 173, relative to new applications filed in place of abandoned applications, says that the drawing of the original application may be transferred to the new application. Further, *ex parte* King, 190 O. G., page 548, established the practice which allows claims re-

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quired to be divided from an application to remain physically in the case, to be temporarily in it but not of it.

All these privileges are apparently allowed under the equitable idea that the applicant thus saves expense.

These various suggestions may be both legal and logical, or legal but not logical—among those things which are lawful but not expedient, or may be neither legal nor logical; but hardly any one in or out of the Office likes the present division practice in spite of its many years of operation, and any suggested change may merit consideration. The apparent letter and spirit of the constitutional provision and the patent laws that have been founded on it is that encouragement of invention is to be positive, and any expedient to that end not contradictory to the letter or spirit of the law, and just to the inventor, to the public and to the Office should be proposed.

It is believed that some attorney who has had working experience both in the Office and out of the Office may, perhaps easily, formulate a division practice at once comprehensive, simple and just. If so, the result would seem clearly to warrant the time and effort.

THE COPY DIVISION OF THE OFFICE.

The present condition of the Copy Division in this Office is worthy of note. As is well known, this division handles the work of furnishing libraries, attorneys and others with printed copies of patents, which constitutes a very considerable amount of business. Before the war, the average receipts of orders for copies amounted to something like 45,000 per week. Since the signing of the armistice these orders have increased enormously and at present they are being received at the rate of 60,000 to 75,000 a week.

Manufacturers giving up war work are branching out in new lines and are ordering whole classes of patents to find the newest and best ways of doing things, and also to see if they are infringing the patents of others, and this has been the probable cause of this large increase in the number of copies ordered.

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There are on hand unfilled class and subclass orders of this character aggregating 150,000 copies of patents. Some of these orders are between two and three months old. There are also on hand large numbers of unfilled orders from libraries in this and foreign countries. The Office is between one and two weeks behind in filling small orders for patent copies received by mail.

Orders from nine of the libraries in this country and one library in Australia for complete copies of 1914-15 issues are on hand. To fill these back orders would require at least the continuous services of two mailing clerks and two copy pullers for a full year.

Owing to the very great importance to inventors and the public of having particular copies promptly supplied in order that pending applications may be amended, suits filed and defended, etc., the class and subclass orders and library orders have had to give way to current cash and coupon orders for copies. The work of the Copy Division has now fallen behind until ordinarily an order for a copy which should be furnished on the day of the receipt of the order is not reached by the clerks who enter the order and give the necessary directions for the selection of the copy for fully a week after the order is received.

Frequently the copy ordered is exhausted and considerable delay results before the same can be reproduced. The appropriation for reproducing these copies during the fiscal year ended June 30, 1919, was insufficient to the amount of $10,000 to pay for the required reproduction, and this amount was, therefore, carried over to the appropriation for the current year. The Appropriations Committee has cut the appropriations out of which the cost of this work is paid from $140,000 heretofore uniformly allowed to $135,000, for the current year, and also placed upon this appropriation the new item of expense of transportation of copies of United States patents to foreign countries. To make matters worse, under the best contract that could be entered into for the current year, the cost of reproducing these patents has increased about 11 per cent.

To fill accumulated orders and provide for the large increase of this work, the Commissioner has requested a further appropriation for ten clerks and fifteen copy pullers and an addition of $25,000 to supplement the $135,000 appropriated.

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ABSTRACT FROM LA PROPRIETE INDUSTRIELLE, APRIL 30, 1919.

For German Austria a decree of the Provisional National Assembly, dated October 30, 1918, has established that the laws and institutions in force in old Austria will still be applicable to the new order, so that all laws relating to industrial property will remain in force without any modification.

The Patent Office of the Czecho-Slovak republic was established January 1, 1919. The proposed patent law, now under consideration, will be based on the Austrian law of 1897, and will retain the examination system, coupled with opposition.

The new Polish state has established a patent office at Varsovia, but nothing is known at present as to its attitude with respect to patent rights acquired in Austria.

The same situation exists with respect to the Jugo-Slavs.

A review of the statistics of the Austrian Patent Office for 1918 shows the influence of the war on the character of inventions for which applications were filed. Material increases are noted in classes dealing with war material and in those classes where attempts have been made to provide substitutes, as in textile fibres and foodstuffs. Other classes show a diminution from war figures, but an increase over those of peace times. This was the case with the class relating to greases, soap, wax and mineral oils, where the number of applications reached its high point in 1917, an evident indication that these were from the beginning the most sought-for substitutes.

OF PERSONAL INTEREST.

Mr. Charles E. Tullar, primary examiner of Division 26, has resigned to enter the employ of the General Electric Company. He entered the Office July 1, 1905, and after being promoted through the various grades became primary examiner October 16, 1917. When the Publicity Committee of the Patent Office Society appointed a subcommittee to communicate with the press, manufacturers and inventors to interest them in legislation designed to benefit the Patent Office, Mr. Tullar was made chairman of the subcommittee. In this activity he displayed abil-

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ity, initiative and energy, so that a large and ambitious program was completely and successfully carried out. This work brought him into intimate contact with the members of the corps, who in several ways showed their appreciation of his efforts, and who wish him every success in his new field.

—■—

Mr. Charles O. Marshall, second assistant examiner, has resigned to take a position with the Toledo Scale Company. He was appointed a fourth assistant examiner December 8, 1913, and was promoted to the position of second assistant examiner February 16, 1918. Mr. Marshall has been in Division 10 during the entire period of his service in the Office. He is considered a capable examiner by his associates, who wish him success.

—■—

Mr. Victor L. Lassagne, second assistant examiner, resigned June 7th to enter the employ of the International Harvester Co., Chicago, at a very substantial increase in salary. Mr. Lassagne has been in the Office since October 1, 1908, and continuously in Division 1. Always an efficient examiner, his departure results in another place difficult to fill.

—■—

Mr. H. C. Bierman, formerly an assistant examiner in the Patent Office, has associated himself with Mr. E. W. Bradford, a well known patent attorney, practicing in Washington and Indianapolis, forming the firm of Bradford, Morrill & Bierman. Mr. Bierman was in Division 31, resigning a year ago to enter the military service, where he was given the rank of master engineer. Upon being discharged from the Army recently he was, for a short time, engaged in prosecuting patent applications for the War Department as a civilian, but resigned his position with the War Department on June 1st to enter the new firm.

—■—

Mr. William S. Gluck, ranking assistant examiner in Division 45, has resigned to open his own office in this city as a patent attorney. He states that he has done this realizing that he is taking some chances, but feeling confident that he can better his position pecuniarily. Many, probably, feel the same way, but hesitate to take the pdunge. Mr. Gluck has been in the Office since June 8, 1906, and was promoted to first assistant on October 16, 1917.

Google

Mr. M. W. Davis, first assistant examiner in Division 19, has resigned to enter the patent department of the Singer Manufacturing Company at Elizabeth, N. J. The fact that Mr. Davis was not an expert in sewing machines apparently did not figure in the transaction. His reputation in the Office was basis enough for the offer of the position. He entered the Examing Corps July 1, 1908, and served continuously in Division 19.

—■—

Mr. M. D. Farmer, second assistant examiner, resigned July 22 to enter the employ of Rosenbaum, Stockbridge and Borst, New York City, patent attorneys. Originally appointed August 1, 1912, Mr. Farmer was for many years in Division 23 and reached the grade of second assistant October 16, 1917.

—■—

Mr. C. A. Hellmann has resigned from the Office and associated himself with the firm of Prentice, Stone and Boyden, patent attorneys of this city. Mr. Hellmann was appointed July 1, 1908, and reached the grade of second assistant July 1, 1916; he was continuously in Division 36 and especially valuable because of his electrical training and his knowledge of German.

—■—

Mr. C. C. Baxter, one of the younger second assistant examiners, has resigned to go with the Victor Talking Machine Co., of Camden, N. J. He entered the corps May 16, 1914, and was made second assistant October 22, 1918, showing what may be done along the line of rapid Office advancement.

—■—

Mr. E. C. Sanborn, of Division 22, another young second assistant, has gone with the Sperry Gyroscope Co., of Brooklyn, N. Y. His record deserves mention. Appointed March 4, 1915, he was promoted to third assistant January 1, 1917, and to second assistant October 12, 1918. The outside firms evidently know how to pick good men.

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Mr. John Flam, an exceptionally valuable assistant in Division 26, has resigned to go with the General Electric Co. While only a third assistant, his worth to that company was quickly recognized. He has been in the Office since July 1, 1916, except for five months when he was in the military service.

—■—

Mr. H. G. Manning, another third assistant, has gone with Williams and Pritchard, patent attorneys, in New York. While Mr. Manning was originally appointed November 8, 1915, he was away and in the military service about a year and three months. He served in Divisions 5 and 3, and most acceptably.

—■—

Mr. Arthur M. Hahn, a fourth assistant, has resigned to enter the employ of Hull, Smith, Brock and West, of Cleveland, Ohio. He was originally appointed as a temporary assistant examiner; he recently passed the Civil Service examination and secured permanent appointment. He was actively in the naval service from May 10, 1918, to February 17, 1919.

—■—

Mr. C. R. Allen, assistant examiner of trade-marks and designs, has resigned to take charge of the trade-mark, design and copyright work of Mason, Fenwick and Lawrence, of this city. Mr. Allen has recently completed his law course and been admitted to the bar, and this, added to his experience in the Trade-Mark Division of the Office, admirably equips him for his new work.

—■—

Mr. F. D. Hardesty, a former member of the Examining Corps, announces his association with Mr. George C. Shoemaker, patent attorney, McGill Building, this city.

—■—

It is with regret that we record the death on July 20, by his own hand, of Mr. Joseph Becker, formerly an examiner in this Office. Since leaving the Corps he had practiced before the Office, handling mostly his own cases, as he was an assiduous inventor in photography and other lines. His act is attributed to continued ill-health.

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THE PROTOTYPE OF THE GARABED.

March 25, 1822, House of Representatives, Proceedings, page 1362.

Flying Machine.

Among the petitions this day presented was the following by Mr. Milnor:

James Bennett, a mathematician of the city of Philadelphia, to the honorable the Senate and House of Representatives of the United States of America in Congress assembled, most respectfully showeth:

That your petitioner having invented a machine by which a man can fly through the air—can soar to any height—steer in any direction—can start from any place, and alight without risk of injury; and whereas a like machine has never been invented in any country or age of the world, so as to be applied to purposes of practical utility, and it is more than probable that artificial flying would not, for a thousand years to come, be brought to the same degree of perfection, had not your petitioner, under Providence, accomplished it; and, as it must be evident to all that Letters Patent would be of little use to the inventor in consequence of various modifications or improvements which might be made, and which never would have been thought of, had not the way first been opened by your petitioner: He therefore solicits a special act of the Congress of the United States, to secure to him and his heirs for the term of forty years, or for such other term as in their wisdom may be deemed just, the right of steering flying machines through that portion of earth's atmosphere which presses on the United States, or so far as their jurisdicition may extend.

By granting your petitioner's request, the honor of the invention shall be conferred on the United States.

J. BENNETT, A. and M.

PHILADELPHIA, Feb. 13, 1822.

Mr. Milnor moved to refer the petition to the Committee on the Judiciary.

Mr. Sergeant opposed the motion. He said that that committee did not undertake to soar into regions so high. Their duties were nearer the earth. He moved to lay it on the table.—Negatived.

Mr. Walworth moved to refer it to the Committee on Roads and Canals.—Negatived.

The question then recurred upon referring it to the Committee on the Judiciary, which was resisted by Mr. Sergeant, on the ground not only that it was above their reach, but also that they had so much business before them of a terrestrial character that they could not devote their time to philosophical and aerial investigation.

The motion was lost; when Mr. Little renewed the motion to lay it on the table.—Carried.

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Member American Patent Law Association, as well as the District of Columbia Bar, and formerly associated with one of the best known of the Patent Bar, is desirous after several years' military service of resuming law work in Washington or New York and would consider giving part or all of his time to a law firm which would appreciate thorough work. The nature of the work required is more important than the initial compensation offered.

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